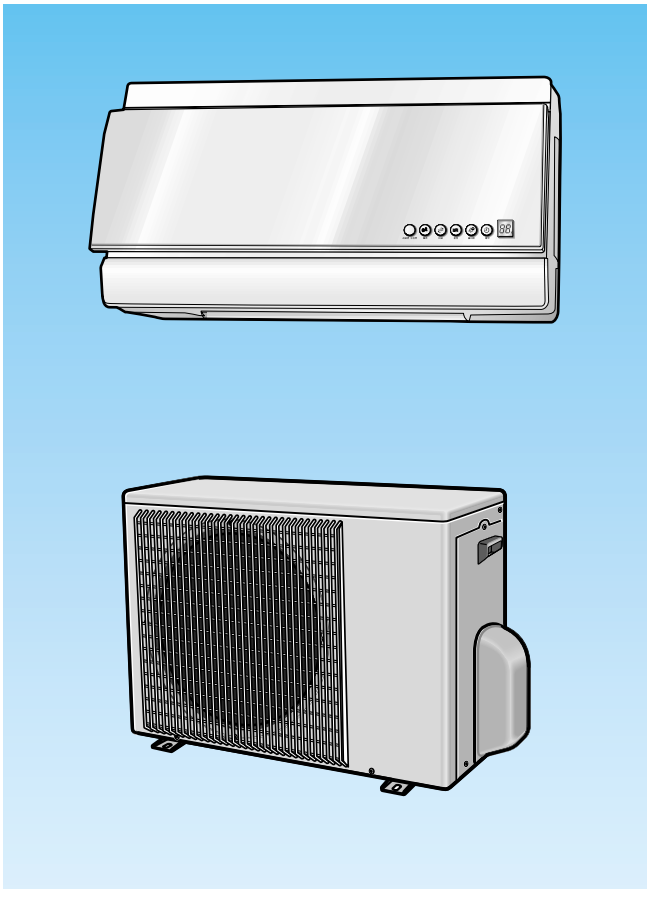
SAMSUNG

ROOM AIR CONDITIONER

INDOOR UNIT	OUTDOOR UNIT
SH09AI8R	SH09AI8RX
SH09AI8V	SH09AI8VX

SERVICE *Manual*

AIR CONDITIONER



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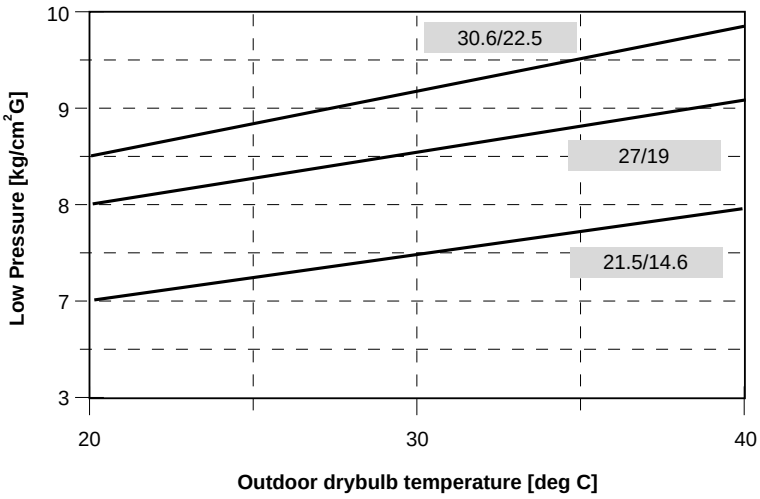
1. Product Specifications

1-1 Table

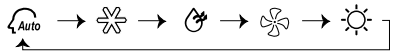
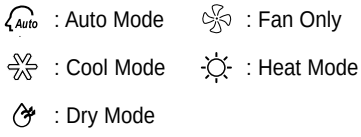
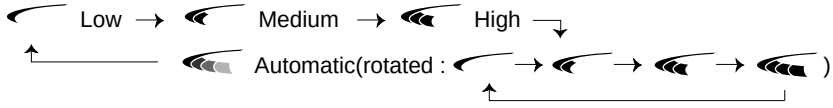
Item \ Model					SH09AI8R / SH09AI8V	
					Indoor unit	Outdoor unit
Type					Wall-mounted	
Perfor-mance	Cooling			kW	2.70	
	Heating				2.90	
	Dehumidifying			ℓ/h	1.4	
	Air Volume	Cooling		m^3/min	6.4	24
		Heating			7.4	24
	Noise ( ):EUROVENT	Cooling		dB	44(58)	52(61)
		Heating			44(58)	52(61)
	Energy Efficiency Ratio	Cooling		W/W	3.03	
		Heating			3.41	
	Power			V-Hz	1-220 / 240-50	
Power	Power Consumption	Cooling		W	890	
		Heating			850	
	Operating Current	Cooling		A	3.9	
		Heating			3.8	
	Power Factor	Cooling		%	98.7	
		Heating			99.9	
	Starting Current			A	21.0	
	Power Cord	Length		m	-	
		Number of Core Wire			-	
		Capacity		A	250V-10 / 16A	
Size	Outer Dimension	W x H x D		mm	760 x 410 x 147	695 x 530 x 280
				inch	29.9 x 16.1 x 5.8	27.4 x 20.9 x 11.0
	Weight			kg	15	28.0
	Refrigerant Pipe	Liquid		mm x L(m)	ø6.35 x 7	
		GAS		mm x L(m)	ø9.52 x 7	
	Drain Hose			D(mm)	ø21	
	Compressor	Type			Rotary	
		Motor	Type		-	-
			Rated Output		-	-
	Blower	Type			Turbo-Fan	Propeller
		Motor	Type		steel	steel
			Rated Output	W	60	25
Heat Exchanger					2ROW 12STEP	1ROW 24STEP
Refrigerant Control Unit					CAPILLARY TUBE	
Freezer Oil Capacity				cc	280	
Refrigerant to Change(R410A)				g	590	
Protection Device(OLP)					RBC12054-12500	
Cooling Test Condition					INDOOR UNIT : DB27˚C WB19˚C	OUTDOOR UNIT : DB35˚C WB24˚C
Maximum Operation Condition					INDOOR UNIT : DB32˚C WB23˚C	OUTDOOR UNIT : DB43˚C WB26˚C

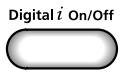
1-2 Pressure Graph



2. Operating Instructions

2-1 The Feature of Key in remote control

No	NAMED OF KEY	FUNCTION OF KEY
1	(On/Off)	On/Off button. Press the button to stop or run the air conditioner.
2	(UP)	Temperature adjustment button(UP). To increase the temperature by the pressing the temperature button.
	(DOWN)	Temperature adjustment button(DOWN). To decrease the temperature by the pressing the temperature button.
3	Mode	Mode selection button. Each time you press this button Mode is changed in the following order   : Auto Mode : Fan Only : Cool Mode : Heat Mode : Dry Mode
4		Fan speed adjustment button. Each time you press this button, FAN SPEED is changed in the following order.  Low → Medium → High Automatic(rotated : → → →)
5		Swing button. It adjusts the airflow to upward and downward, left and right.
6		Turbo button. The air conditioner cools or heats the room as quickly as possible. After 30minutes, the air conditioner is reset automatically to the previous mode.
7		Energy saving button. If you wish to save energy when using your air conditioner, select the Energy saving mode with the button.
8		Sleep button. The sleep timer can be used when you are cooling or heating your room to switch the air conditioner off automatically after a period of 6 hours.

No	NAMED OF KEY	FUNCTION OF KEY
9		Anion button. Press the button to generate ion from the air conditioner.
10		On Timer button. The On Timer enables you to **switch on** the air conditioner automatically after a given period of time that is from 30 minutes to 24 hours. To set the operating time, press the button one or more times until the required time display.
11		Off Timer button. The Off Timer enables you to **switch off** the air conditioner automatically after a given period of time that is from 30 minutes to 24 hours. To set the operating time, press the button one or more times until the required time display.
12		Timer Set/Cancel button. After setting On Timer or Off Timer, press the button to set it completely. And press the button again to cancel On Timer or Off Timer set.
13		Digital i On/Off button. If you want to turn off the display during operation press the button.

2-1-1 Name & Function of Key in remote control

1. AUTO MODE : In this mode, operation mode(COOL, HEAT) is selected automatically by the room temperature of initial operation.

Room Temp	Operation Type
Tr≥ 21°C+ΔT	Cool Operation (Set Temp:24˚C+ΔT)
21°C +ΔT>Tr	Heat Operation (Set Temp:22˚C+ΔT)

   ΔT= -1°C, -2°C, 0°C, +1°C, +2°C
   ΔT is controlled by setting temperature up/down key of remote control

2. COOL MODE : The unit operates according to the difference between the setting and room temperature. (18°C~30°C)

3. HEAT MODE : The unit operates according to the difference between the setting and room temperature.(16°C~30°C)
   *Prevention against cold wind : In order to prevent the cool air from flowing out at the heat mode, the indoor fan does not operate or operates very slowly in the following cases. At this time, the indoor heat exchanger will be preheating.
   - For 3~5 minutes after the initial operation
   - For deicing operation
   - The operation of an indoor fan in accordance with the temperature of an indoor heat exchanger

The temperature of indoor heat exchanger	Indoor fan speed
below 28˚C	off
28˚C~below 34˚C	LL Speed
34˚C~below 40˚C	L Speed
above 40˚C	Setting Speed

   *High temperature release function : It is a function to detect an outdoor overload by the sensor of an indoor heat exchanger and to turn the outdoor fan or the compressor ON/OFF for safety.
   *Deice : Deicing operation is controlled by indoor unit's heat exchanger temperature and accumulating time of compressor's operation.
   Deice ends by sensing of the processing time by deice condition.

4. DRY MODE : Has 3 states, each determined by room temperature.
   The unit operates in DRY mode.
   *Compressor ON/OFF Time is controlled compulsorily(can not set up the fan speed, always breeze).
   *Protective function : Low temperature release. (Prevention against freeze)

5. TURBO MODE : This mode is available in AUTO, COOL, HEAT, DRY, FAN MODE.
   When this button is pressed at first, the air conditioner is operated “powerful” state for 30 minutes regardless of the set temperature, room temperature.
   When this button is pressed again, or when the operating time is 30 minutes, turbo operation mode is canceled and returned to the previous mode.
   *But, if you press the TURBO button in DRY or FAN mode that is changed with AUTO mode automatically.

6. SLEEP MODE : Sleep mode is available only in COOL or HEAT mode.
   The operation will stop after 6 hours.
   *In COOL mode : The setting temperature is automatically raised by 1°C each 1hour When the temperature has been raised by total of 2°C, that temperature is maintained.
   *In HEAT mode : The setting temperature is automatically dropped by 1°C each 1hour.
   When the temperature has been dropped by total of 2°C, that temperature is maintained.

7. FAN SPEED : Manual (3 step), Auto (4 step)
   Fan speed automatically varies depending on both the difference between setting and the room temperature.

8. COMPULSORY OPERATION :
   For operating the air conditioner without the remote control.
   *The air conditioner starts up in the most suitable mode for the room temperature:

Room Temperature	Operating Mode	Temperature Setting
Less than 21˚C	Heat	22˚C approx.
21˚C or above	Cool	24˚C approx.

9. SWING : BLADE-H is rotated vertically by the stepping motor.
   *Swing Set : Press the button under the remote control is displayed on LCD the and the blades move up and down, left and right. If the one more time press the button, blades location is stop.

10. SETTING THE ON/OFF TIMER. :
   *ON TIMER : The On Timer enables you to switch on the air conditioner automatically after a given period of time. You can set the period of time from 30 minutes to 24 hours.
   *OFF TIMER : The Off Timer enables you to switch off the air conditioner automatically after a given period of time. You can set the period of time from 30 minutes to 24 hours.

11. GENERATING ANION :
   The air conditioner can generate anion with an ionizer in the indoor unit.

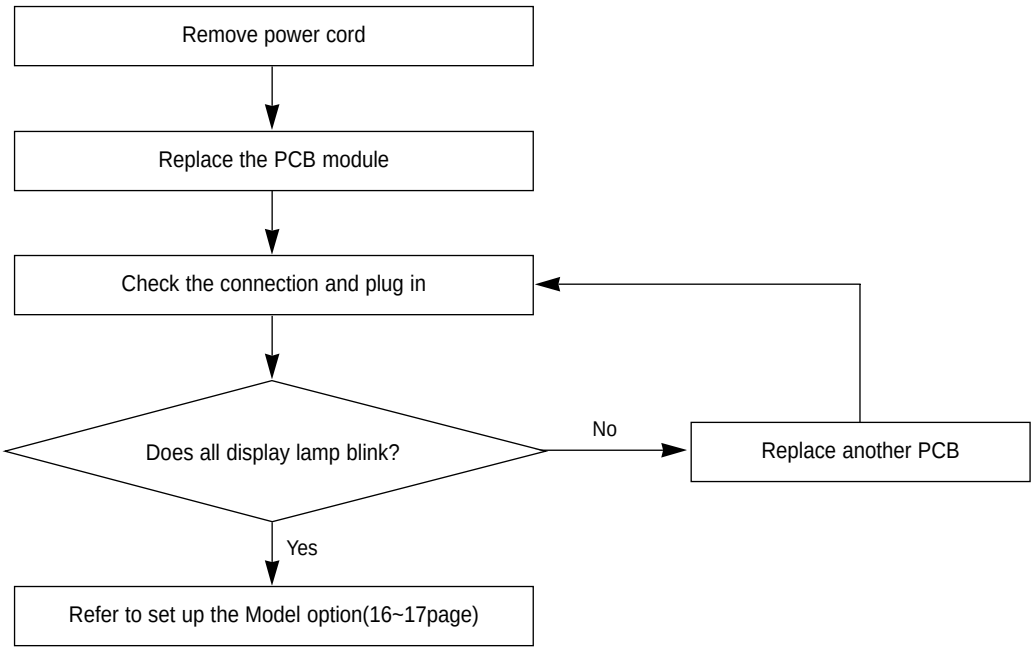
12. SELF DIAGNOSIS

Error Mode	DISPLAY 7-SEGMENT		Remark
	Operation Off	Operation On	
Indoor unit room temperature sensor error (open or short)	OFF	E1	
Indoor unit heat exchanger temperature sensor error(open or short)	OFF	E2	
Indoor FAN MOTOR error : Keep the RPM value 450 below for 15 seconds	OFF	E3	
EEPROM error	OFF	E6	
Error in option In case of No option set-up In case of option data error	All lamp blinking	All lamp blinking	

13. BUZZER SOUND : Whenever the On/Off button is pressed or whenever change occurs to the condition which is set up or select, the compulsory operation mode, buzzer is sounded "beep".

2-2 Replace PCB Model option

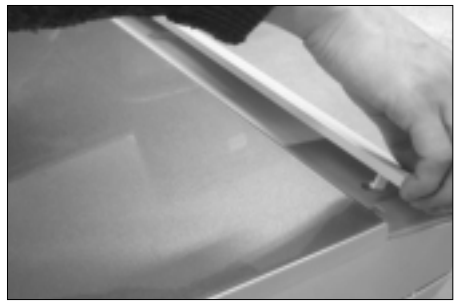
2-2-1 Replace PCB model option

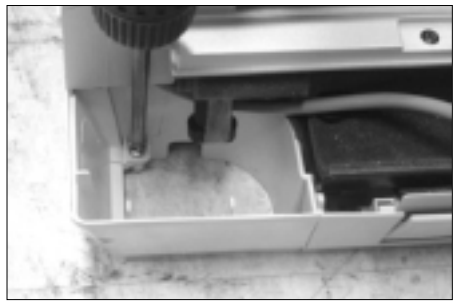


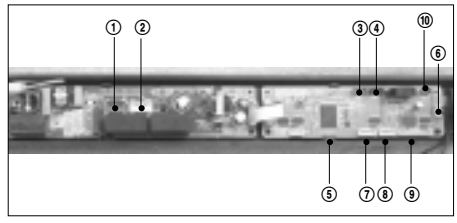
3. Disassembly and Reassembly

Stop operation of the air conditioner and remove the power cord before repairing the unit.

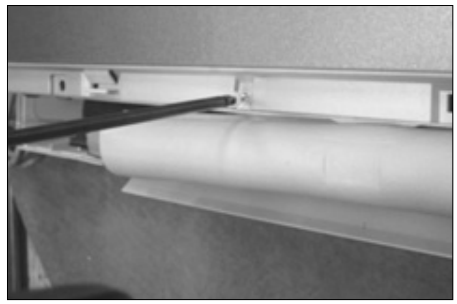
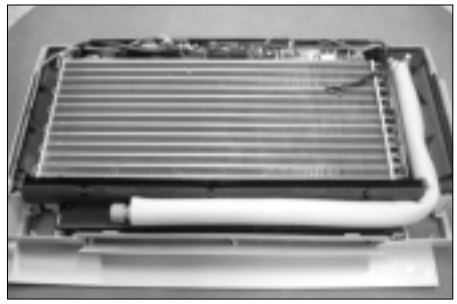
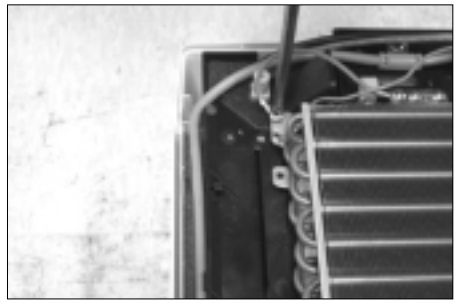
3-1 Indoor Unit

No	Parts	Procedure	Remark
1	Front Grille	1) Stop the air conditioner and shut off the main power. 2) Hold the knobs on both sides of the Top Cover. Then, pull the cover toward you and lift it up to separate it from the main body. (Please push down the bottom cover for disassembly.)	
		3) Unscrew the Main PCB Cover.	
		4) Loosen the Panel fixing screws on both sides of the bottom Panel and pull down the cover and separate the projection from the groove.	

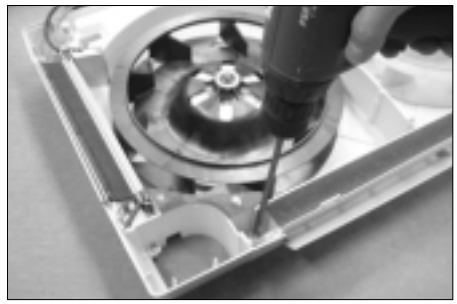
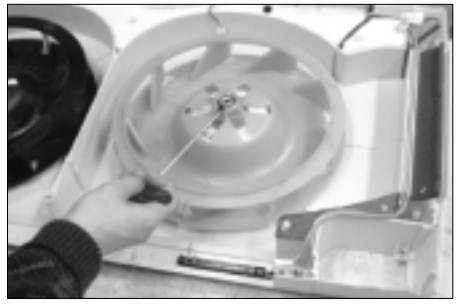
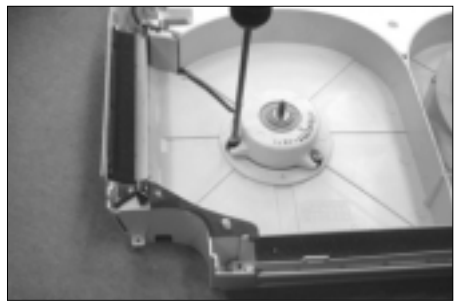
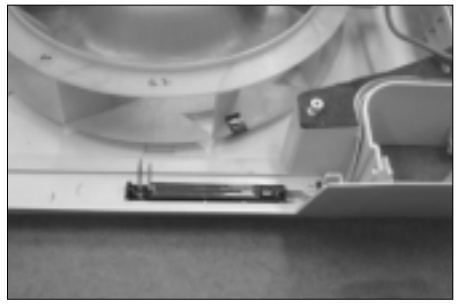
No	Parts	Procedure	Remark
		● Loosen the pipe bush screws. (Pull down the cover and separate the projection from the groove.)	
		5) Separate the 2 grille driving Motor Connectors and one receiving sensing connector from the main PCB.	
			<Main PCB Connector Illustration Drawing>



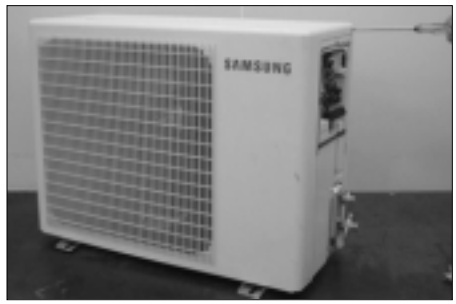
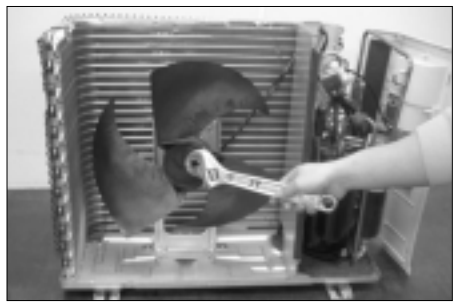
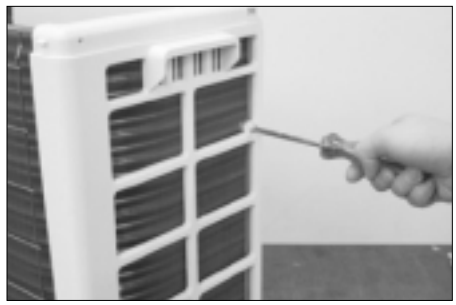
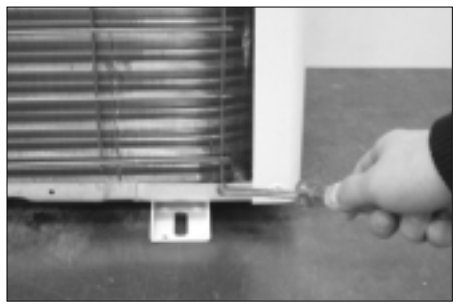
No	Connector Parts
①	Fan Motor(L)
②	Fan Motor(R)
③	Wing Motor(L)
④	Wing Motor(R)
⑤	Wing Motor(B)
⑥	Room Temperature/Piping Sensor
⑦	Grille Driving Motor(L)
⑧	Grille Driving Motor(R)
⑨	Mark/Receiver
⑩	Anion

No	Parts	Procedure	Remark
		6) Loosen the 4 fixing screws.	
		7) Detach the Panel. ● **Cautions for Panel Assembly** - Put the separated connectors in the right position respectively. - Please avoid suppression of wires or deviation of power cords and cross room power connection cables. (For details, refer to the Indoor Unit Connection Cable Installation.)	
2	MAIN PCB	1) Loosen the fixing screws on both sides of the Electric Component Box. 2) Detach all the connectors for the main PCB. ● **Cautions for Connectors Assembly** Be sure to put connectors in the right position.	
		3) Loosen the fixing screws on both sides of the Electric Component Box. 4) Loosen the grounding screws.	

No	Parts	Procedure	Remark
3	Basket	1) Loosen the 3 fixing screws. 2) Detach the Basket. ● **Cautions for Basket Assembly** Be sure to check if the projection on both sides was positioned completely in the groove.	
4	Heat Exchanger	1) Loosen the 3 Heat Exchanger fixing screws. 2) Lift up the Heat Exchanger slightly for disassembly. ● **Cautions for Heat Exchanger Assembly** Never allow the insulating materials to be damaged or the piping to be deformed during disassembly and assembly.	
5	Fan & Motor	1) Loosen the 6 cover screws.	

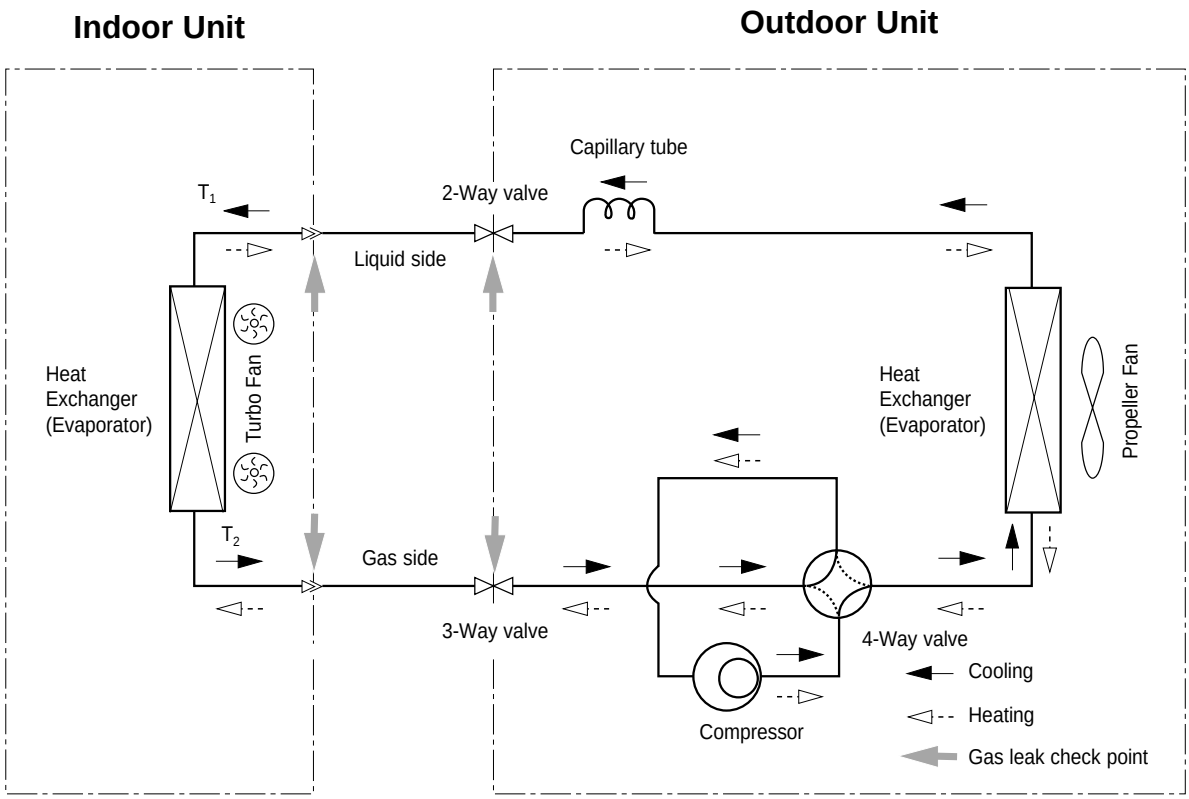
No	Parts	Procedure	Remark
		2) Loosen the bottom wing screws to detach the assembly. (one fixing screw)	
		3) Detach the Fan fixing bolts. (with a M3 wrench)	
		4) Loosen the 3 Fan Motor fixing screws. ● **Cautions for Motor Assembly** - Do not miss the Motor anti-vibration rubber and washer. - Do not miss the Motor wire fixing cover.	
		5) Detach the Negative Ionizer. ● **Cautions for Ionizer Assembly** Never allow the deformation of the Negative Ionizer pin.	

3-2 Outdoor Unit

No	Parts	Procedure	Remark
1	Common Work	1) Loosen 2 fixing screws and separate the Cover Valve. 2) Detach the connection wire from the Terminal Block.	
		3) Loosen 4 fixing screws and detach the Cabinet Front.	
		4) Loosen 2 fixing screws and detach the Cabinet-Side LF.	
		5) Loosen 2 fixing screws of the Cabinet-Side RH.	
		6) Loosen 2 fixing screws and detach the Bar Steel.	

No	Parts	Procedure	Remark
2	Fan & Motor	1) Detach the connection wire of the Motor Fan. 2) Remove the Nut Flange. (Turn to the clockwise) 3) Detach the Fan. 4) Loosen 4 fixing screws to detach the Motor. 5) Loosen 4 fixing screws and detach the Motor Bracket from the Base.	
3	Heat Exchanger	1) Loosen 2 fixing screws of left and right side. 2) Disassemble the inlet and outlet pipe by welding. 3) Detach the Heat Exchanger.	
4	Compressor	1) Open the Terminal Cover of Compressor and unscrew the Connection Terminal. 2) Disassemble the inlet and outlet pipe of Compressor by welding. 3) Loosen 3 fixing bolts of the lower part. 4) Detach the Compressor.	

4. Refrigerating Cycle Diagram



5. Set Up the Model Option

5-1 Setting Option Setup Method

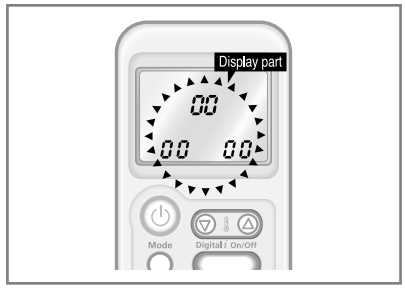
Option No. : 025326- 14020c (SH09AI8R / SH09AI8V)

Step 1 : **Enter the Option Setup mode.**

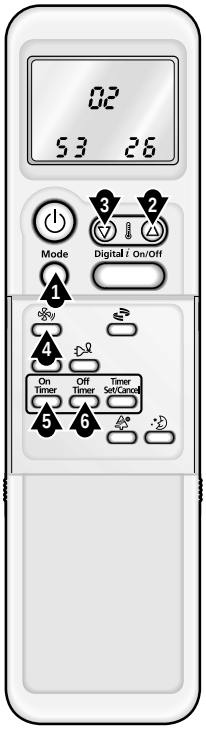
1st Take out the batteries of remote control.

2nd Press the temperature ▽ / △ button simultaneously and insert the battery again.

3rd Make sure the remocon display shown as 00 00 00.



Step 2 : **Enter the Option Setup mode and select your option according to the following procedure.**



✻ Setting is not required if you must 0 a value which has a 0 default.

1

The default value is 00 00 00.
Otherwise, push the Mode button to 0.
Every time you push the button, the display panel reads 1 or 0 repeatedly.

2

Push the △ button to set the display panel to 2.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

3

Push the ▽ button to set the display panel to 5.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

4

Push the button to set the display panel to 3.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

5

Push the On Timer button to set the display panel to 2.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

6

Push the Off Timer button to set the display panel to 6.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

✻ Setting is not required if you must 0 a value which has a 0 default.

7

The default value is 00 (10) 00.
Otherwise, push the Mode button to 1.
Every time you push the button, the display panel reads 1 or 0 repeatedly.

8

Push the ▲ button to set the display panel to 4.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

9

Push the ▼ button to set the display panel to 0.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

10

Push the button to set the display panel to 2.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

11

Push the On Timer button to set the display panel to 0.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

12

Push the Off Timer button to set the display panel to c.
Every time you push the button, the display panel reads 0 ➡ 1 ➡ 2 ➡ 3 ➡ ··· 9 ➡ A ➡ b ➡ c ➡ d ➡ E ➡ F repeatedly.

Step 3 : Upon completion of the selection, check you made right selections.

Press the Mode Selection key, Mode to set the display part to 0 and check the display part.

➡ The display part shows 53 (02) 26.

Press the Mode Selection key, Mode to set the display part to 1 and check the display part.

➡ The display part shows 02 (14) 0c.

Step 4 : Pressing the ON/OFF button (⏻)

When pressing the operation ON/OFF key with the direction of remote controller for unit, the sound "Ding" or "Diriring" is heard and the OPERATION ICON(≋) lamp of the display is flickering at the same time, then the input of option is completed. (If the diriring sound isn't heard, try again pressing the ON/OFF button.)

Step 5 : Unit operation test-run

First, Remove the battery from the remote controller.

Second, Re-insert the battery into the remote controller.

Third, Press ON/OFF key with the direction of remote controller for set.

• Error Mode

1st If all lamps of indoor unit are flickering, Plug out, plug in battery again and press ON/OFF key to retry.

2nd If the unit is not working properly or all lamps are continuously flickering after setting the option code, see if the correct option code is set up for its model.

6. Troubleshooting

Check the basic items first to judge if the problem was caused by breakdown or misuse. If none of the basic items are related to the problem, please scrutinize the machine according to the 'Breakdown Diagnosis by Symptoms' method.

6-1 Basic Breakdown Diagnosis Items

1. Is power supply right?
   The power supply shall be within ±10% of the input voltage.
   Otherwise, the machine may fall in abnormal operation.

2. Is the indoor unit connected with the outdoor unit?

3. The following symptoms are not categorized in the breakdown.

Symptoms	Reasons
Inoperative	- Power failure or plugged-out? - Wasn't the reserved operation period over? - Take out the batteries of remote control and put them in it one minute later. Then put the remote control in operation again. - Plug out and plug in 10 seconds later.
No cool wind	- Isn't the dust collecting filter clogged with dust or stained? - Isn't there any direct ray or obstacle to the outdoor unit? - Is the temperature setting value too high? If so, please turn it down. - Isn't the air conditioner in wind-only operation?
Strange smell	- Please ventilate the room because the smell penetrated into the wall or furniture is not coming out as the air conditioner begins operating. - Check if the dust collecting filter is stained.
Inoperative remote control	- Aren't batteries dead? - Aren't batteries wrongly positioned? - Isn't the indoor unit sensor covered? - Isn't the electric wave blocked by neon-signs or electronic fluorescent lamps?
Unable to control air volume	- Is the operation mode in one of AUTO, DEHUMID, or TURBO? Then, no further control is required because the air volume will be automatically controlled. - Please return to the COOL/WIND mode to recheck the condition.
Unable to reserve	- Please check if you pressed the OK/CANCEL button after you set the reservation time.
Unable to set temperature	- Isn't the operation mode in TURBO? Then, no further control is required because the air volume will be automatically controlled. - Please return to the COOL mode to recheck the condition.
Water leak (from indoor unit)	- Check the refrigerant pressure. (to check refrigerant leak) - Is the indoor unit so installed that water is smoothly drained? - Aren't the drain outlet and hose clogged? - Please re-vacuum and recharge refrigerant. (Insufficient refrigerant distribution may prevent water from forming on the evaporator.)

6-2 Trouble check in the initial status

6-2-1 Diagnosis and marking of the part in trouble.

Please check the air conditioner operation status and write the check result in the chart in the room.

7-SEGMENT Mark	Error Part
E1	Indoor unit Temperature Sensor Error(SHORT/OPEN)
E2	Indoor unit Piping Sensor Error(SHORT/OPEN)
E6	EEPROM Error(Option Memory)
All Lamp Off	- Option Error - Option Unselected - Option Data Error

The motor RPM is not sensible because the indoor fan motor has no feedback sensor.
Therefore, there is no fan motor error.

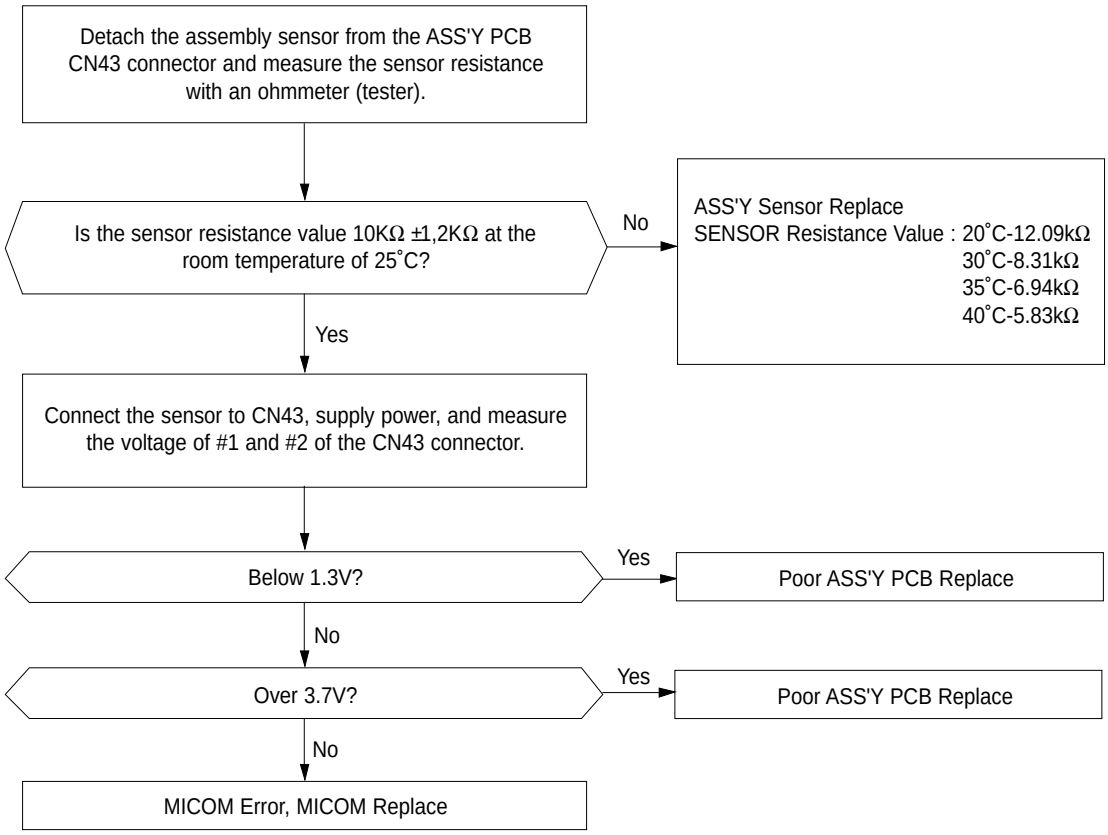
6-2-2 Operation with abnormal motion

NO	Abnormal condition	Inspection		Initial Diagnosis
1	No response from the remote control operation signal.	1) Plug out and plug in 5 seconds later.	Able to operate the remote control	OK
			Unable to operate the remote control	Press the AUTO button in the indoor unit. (1) If it operates, the remote control and indoor unit receiver are in trouble. (2) If not, the indoor unit is in trouble.
2	Unable to operate the outdoor unit	1) Press the TURBO button with the remote control. 2) In 3 minutes, check the voltage between the indoor unit terminal block N and L.	AC198V ~ AC242V	Problem with the outdoor unit or PCB
			No power source displayed.	Problem with the relay (RY71) or PCB

6-3 Breakdown diagnosis by symptoms

6-3-1 Indoor unit temperature sensor failure

Error mark	Error Part
7-SEGMENT	Indoor unit temperature sensor open or short
E1	


Detach the assembly sensor from the ASS'Y PCB CN43 connector and measure the sensor resistance with an ohmmeter (tester).
Is the sensor resistance value 10KΩ ±1,2KΩ at the room temperature of 25˚C?
No
ASS'Y Sensor Replace
SENSOR Resistance Value : 20˚C-12.09kΩ
30˚C-8.31kΩ
35˚C-6.94kΩ
40˚C-5.83kΩ
Yes
Connect the sensor to CN43, supply power, and measure the voltage of #1 and #2 of the CN43 connector.
Below 1.3V?
Yes
Poor ASS'Y PCB Replace
No
Over 3.7V?
Yes
Poor ASS'Y PCB Replace
No
MICOM Error, MICOM Replace

6-3-2 Indoor unit Pipe Sensor in Trouble

Error mark	Error Part
7-SEGMENT	Indoor unit Heat exchange temperature sensor open or short
E2	

1. Check the assembly condition of the sensor connector(CN43) on the indoor unit Main PCB and if not assembled, reassemble the connector accurately.

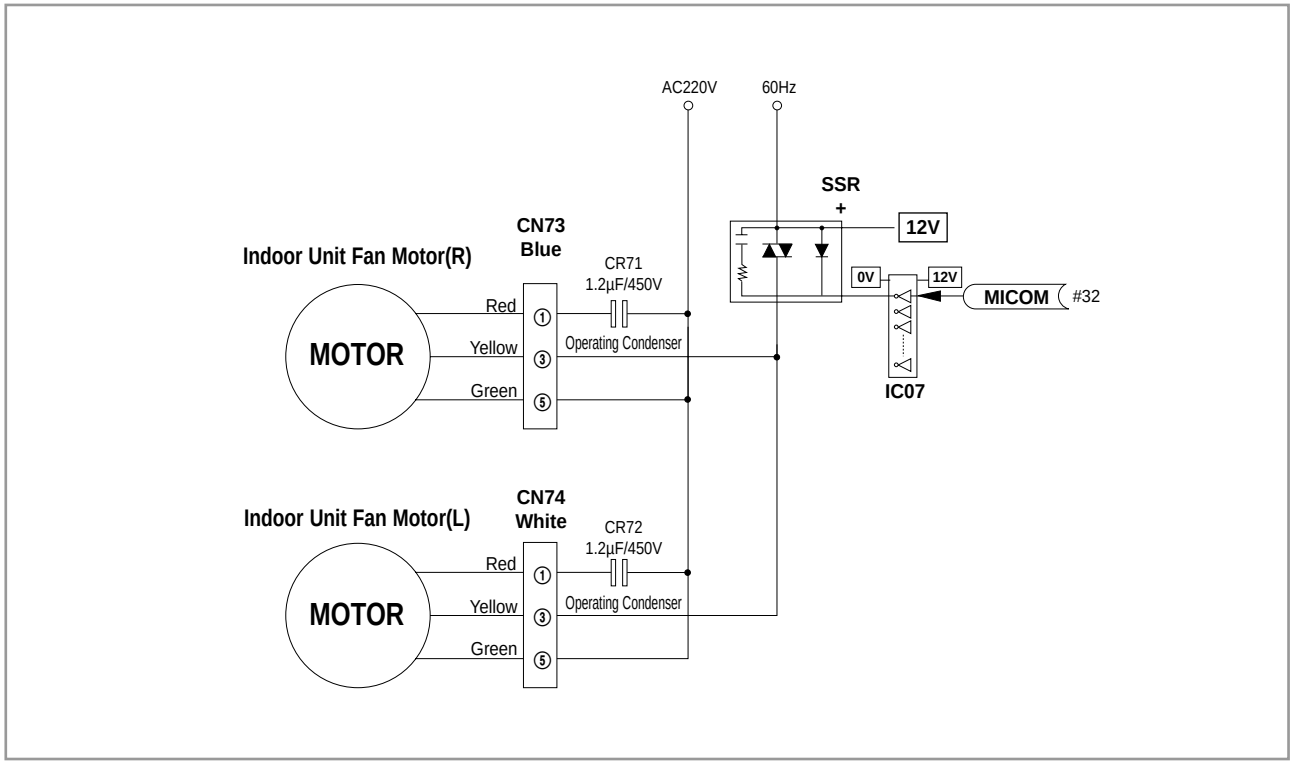
2. Detach the indoor pipe sensor connector(CN43) and check the resistance between connector 3 and 4.

Temperature(˚C)	Resistance Value (KΩ)	Temperature(˚C)	Resistance Value (KΩ)	OTHERS
15	8.31	30	8.31	The data error is ±1%.
20	6.94	35	6.94	
25	5.83	40	5.83	

If the above data is not met, replace the indoor pipe sensor.

3. Assemble the indoor pipe sensor to PCB, plug in, and check the voltage of connector 3 and 4. If the resistance is below 0.5V or over 4.9V, replace the indoor Main PCB (PCB phase short or disconnected)

6-3-3 When the Indoor unit fan motor doesn't operate



1. Check if power(AC220V) is being supplied.

2. Check if the operating condenser(CR71, CR72) and connector(CN73, CN74) are properly assembled.

3. Put the fan in operation with the remote control and check if the fan is rotating after the auto grille is full open.
   (If so, it is in norma operation)

4. If not, measure AC voltage of No. 5 and 3 of CN73, CN74.
   - **If the voltage value is 180~220V :** Poor motor
   - **If not :** Poor PCB

6-3-4 When the power doesn't come in.

1. Pre-inspection Items
   1) Power voltage (AC198V ~ AC242V)
   2) Power cable connection
   3) Check if the standard lamp(in blue) of the display part twinkles with a bang sound when you supply power.
      If not, please check the fan according to the following procedure.

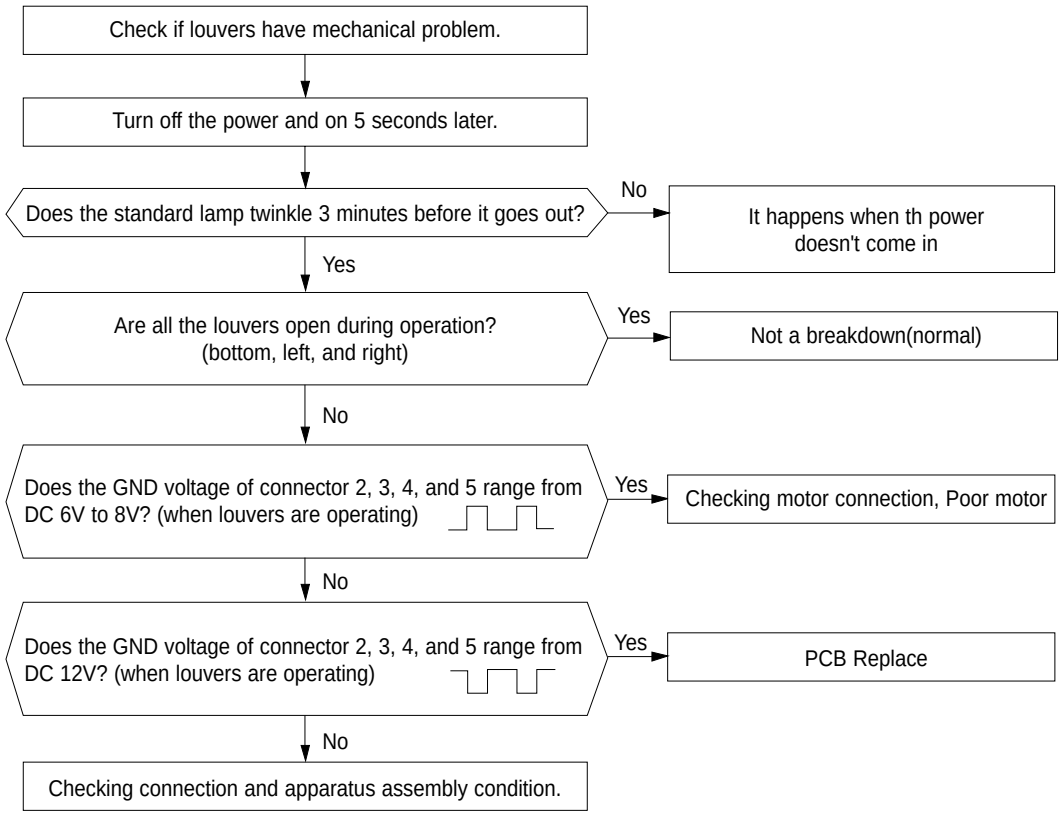
2. Inspection Procedure
   1) Checking the main PCB power
      (1) Check if the power cable connector(in black or white) were normally assembled.
         • White : to the N(1) terminal of the terminal block
         • Black : to terminal 1 of PCB
      (2) Check if the outdoor power cable connector were normally assembled.
         • White : to the N(1) terminal of the terminal block
         • Black : to terminal 1 of the terminal block
      (3) Check if the PCB fuse(F701, 250V 3.15A) is disconnected.
      (4) Check the output voltage of the static voltage IC.
         • KA78L05(IC02) : DC4.7 ~ 5.3V
         → If no DC power source was output from the above items, PCB should be replaced.

   2) Checking outdoor unit power supply
      (1) Press the TURBO button with the remote control.
         - In 3 minutes, check the outdoor unit(compressor/outdoor fan) is operating.
         - If not, check the voltage of both black and white cable of the outdoor unit power supply connector. (AC198V ~ AC242V)
      (2) Supply AC 220V to the outdoor unit forcibly.
      (3) If the outdoor unit has no motion, check the outdoor unit and surrounding connection cables.
      (4) If the outdoor starts operation, check the indoor unit connection and PCB.

6-3-5 When louvers(bottom, left, and right) don't operate

1. Inspection Items
   1) Power Voltage (AC198V ~ AC242V)
   2) Louver Motor Connector(CN61, CN62, CN65)

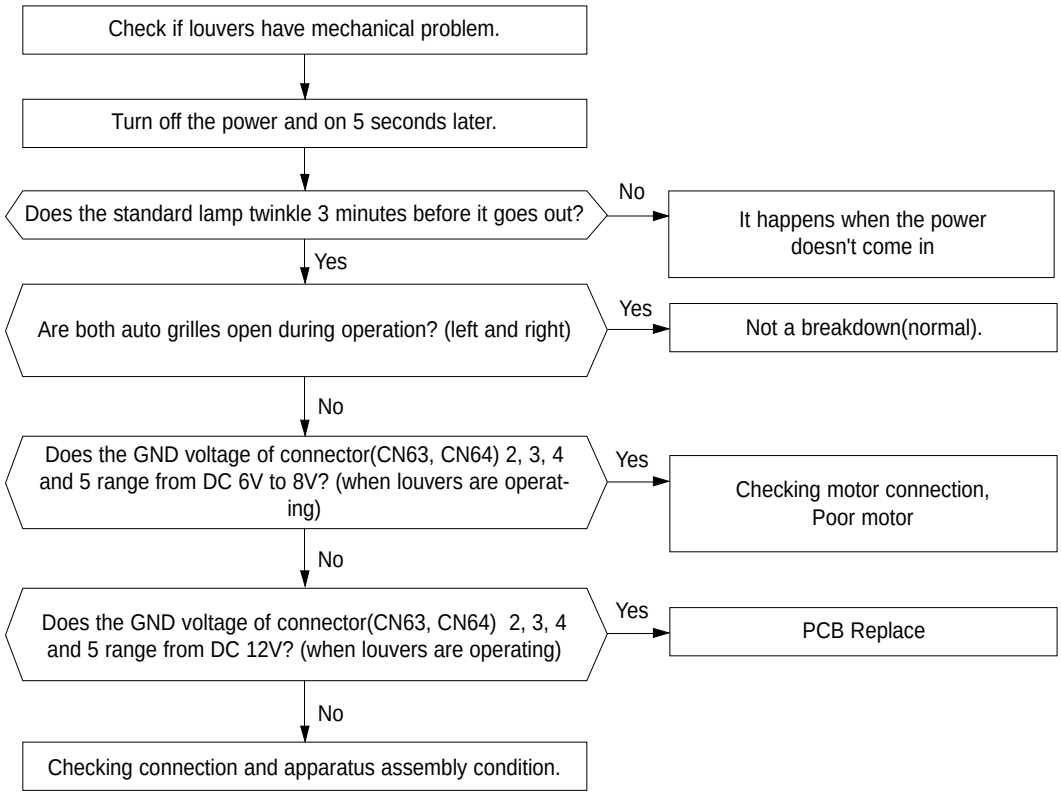
2. Inspection Procedure


Check if louvers have mechanical problem.
Turn off the power and on 5 seconds later.
Does the standard lamp twinkle 3 minutes before it goes out?
No
It happens when th power doesn't come in
Yes
Are all the louvers open during operation? (bottom, left, and right)
Yes
Not a breakdown(normal)
No
Does the GND voltage of connector 2, 3, 4, and 5 range from DC 6V to 8V? (when louvers are operating)
Yes
Checking motor connection, Poor motor
No
Does the GND voltage of connector 2, 3, 4, and 5 range from DC 12V? (when louvers are operating)
Yes
PCB Replace
No
Checking connection and apparatus assembly condition.

6-3-6 When the automatic grille doesn't operate.

1. Inspection Items
   1) Power Voltage (AC198V ~ AC242V)
   2) Assembly of Connector between both Motors

2. Inspection Procedure


Check if louvers have mechanical problem.
Turn off the power and on 5 seconds later.
Does the standard lamp twinkle 3 minutes before it goes out?
No
It happens when the power doesn't come in
Yes
Are both auto grilles open during operation? (left and right)
Yes
Not a breakdown(normal).
No
Does the GND voltage of connector(CN63, CN64) 2, 3, 4 and 5 range from DC 6V to 8V? (when louvers are operating)
Yes
Checking motor connection, Poor motor
No
Does the GND voltage of connector(CN63, CN64) 2, 3, 4 and 5 range from DC 12V? (when louvers are operating)
Yes
PCB Replace
No
Checking connection and apparatus assembly condition.

6-3-7 When the remote control is not receiving.

1. Check the remote control quality with a remote control receiving tester.

2. Check if the connector was normally assembled.

3. Put the set in operation and check the voltage of No. 1(+) and No. 3(-) of the main PCB CN 94 while operating the remote control. When the voltage descends below 3V, the assembly module PCB is normal and the main PCB is poor. Then replace the main PCB.

4. Replace the assembly display PCB because the module PCB is poor if the voltage between No. 1, 2, and 3 of CN 94 maintains 5V after the remote control starts operation.

6-4 PCB Inspection Method

6-4-1 Pre-inspection Notices

1. Check if you pulled out the AC power plug when you eliminate the PCB or front panel.
2. Don't hold the PCB side not to impose excessive force on it to eliminate the PCB.
3. Don't pull the lead wire but hold the whole housing to connect or disconnect a connector to the PCB.

6-4-2 Inspection Procedure

1. Check connector connection and peeling of PCB or bronze coating pattern before you think the PCB is broken.
2. The PCB is composed of the 3 parts.
   - Main PCB Part : MICOM and surrounding circuit, relay, room fan motor driving circuit and control circuit, sensor driving circuit, power circuit of DC12V and DC5V, and buzzer driving circuit
   - Display part : LED lamp
   - Switch part : Switch

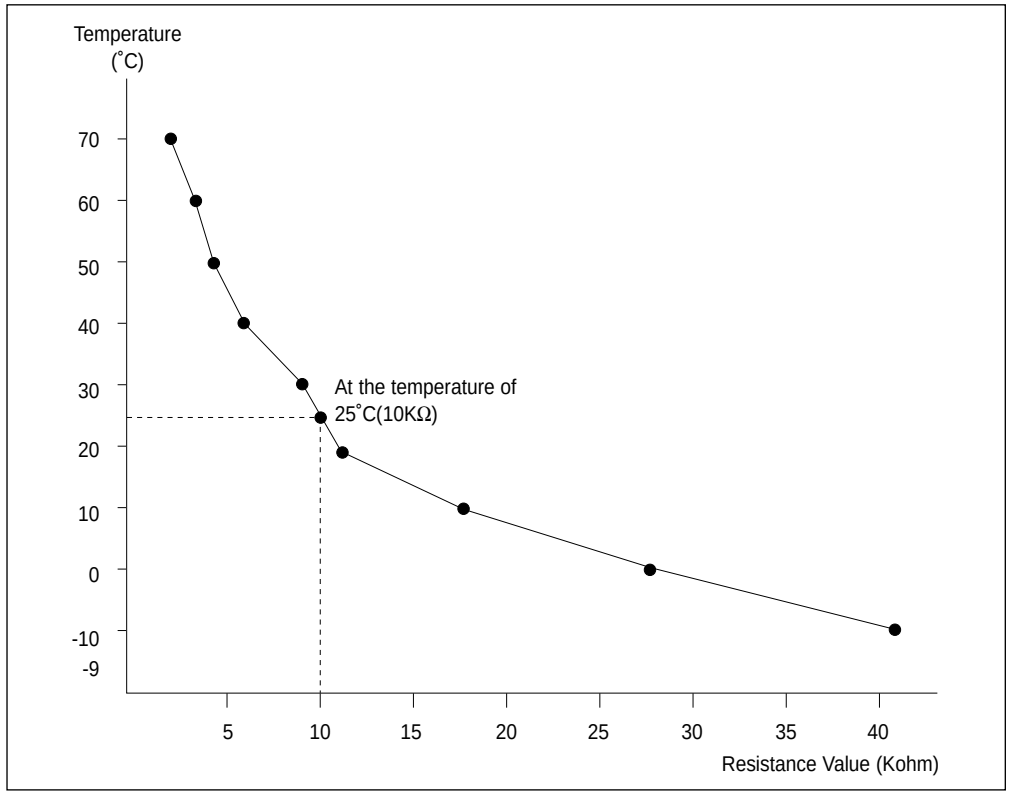
6-4-3. Detailed Inspection Procedure

NO	Procedure	Inspection Method	Cause
1	Plug out and pull the PCB out of the electronic box.	1) Is the fuse disconnected? (F701)	• Overcurrent • Room Fan Motor Short • ASS'Y Main PCB AC Pattern Short
2	Check the PCB fuse. supply power. If the standard lamp twinkles at this time, the above 1) ~ 3) have no relation.	Checking the power voltage.	
		1) Is the BD71input voltage AC198V~AC242V?	• Poor Power Cord, Fuse Disconnection, Wrong Power Cable Wiring, Poor AC Part
		2) Is the voltage between both terminals of the output C104 on the 2nd side of the transformer AC12V ±0.5V?	• Poor Switching Trans, Poor Power Circuit
		3) Is the voltage between both terminals of OUT and GND of IC02(KA78L05) DC5V ±0.5V?	• Poor Power Circuit, Load Short
3	Press the OPER/STOP button one time to enter the TURBO mode. But, exclude the RESERVE operation.	Checking the power voltage.	
		1) Check the voltage of the relay(RY71) coil(IC05 PIN #10 and GND : OV, PIN#7 and GND : 5V) during operation(3 minutes after TURBO operation).	• Relay(RY71) Coil Disconnection, Poor IC05
		2) Check the voltage of both terminals of terminal block 1 and N(1) after 3 minute operation.: AC220V	• Poor Relay(RY71) Contact
4	Press the OPER/STOP button one time to enter the OPER mode. 1. Air Volume[High] 2. Continuous Operation	1) Is the voltage over AC180V being imposed on terminal #3 and #5 of the room fan motor connector(CN73 and CN74)?	• Poor Room Fan Motor
		2) The room fan motor doesn't run.	• Poor Room Fan Motor Connector (CN73 and 74) Contact
		3) The power voltage between terminal #3 and #5 of the connector(CN73 and CN74) is 0V.	• Poor ASS'Y Main PCB • Poor Connection

6-4-4 Temperature Sensor Feature Conversion Table(Room Temperature Sensor); 103AT

Temperature [˚C]	Sensor Resistance [Kohm]	Temperature [˚C]	Sensor Resistance [Kohm]	Temperature [˚C]	Sensor Resistance [Kohm]	Temperature [˚C]	Sensor Resistance [Kohm]
70	2.229						
69	2.296	49	4.300	29	8.622	9	18.700
68	2.365	48	4.444	28	8.944	8	19.480
67	2.437	47	4.594	27	9.281	7	20.290
66	2.512	46	4.749	26	9.632	6	21.150
65	2.589	45	4.912	25	10	5	22.050
64	2.669	44	5.080	24	10.380	4	22.990
63	2.752	43	5.256	23	10.780	3	23.900
62	2.838	42	5.439	22	11.200	2	25.030
61	2.928	41	5.630	21	11.630	1	26.130
60	3.021	40	5.828	20	12.090	0	27.280
59	3.116	39	6.033	19	12.560	-1	28.470
58	3.216	38	6.246	18	13.060	-2	29.720
57	3.319	37	6.468	17	13.570	-3	31.040
56	3.426	36	6.699	16	14.120	-4	32.430
55	3.537	35	6.941	15	14.680	-5	33.890
54	3.652	34	7.192	14	15.280	-6	35.430
53	3.772	33	7.455	13	15.900	-7	37.050
52	3.897	32	7.729	12	16.550	-8	38.760
51	4.026	31	8.015	11	17.240	-9	40.560
50	4.161	30	8.313	10	17.960		

<Temperature Sensor Characteristic Curve>



6-5 Main Part Inspection Method

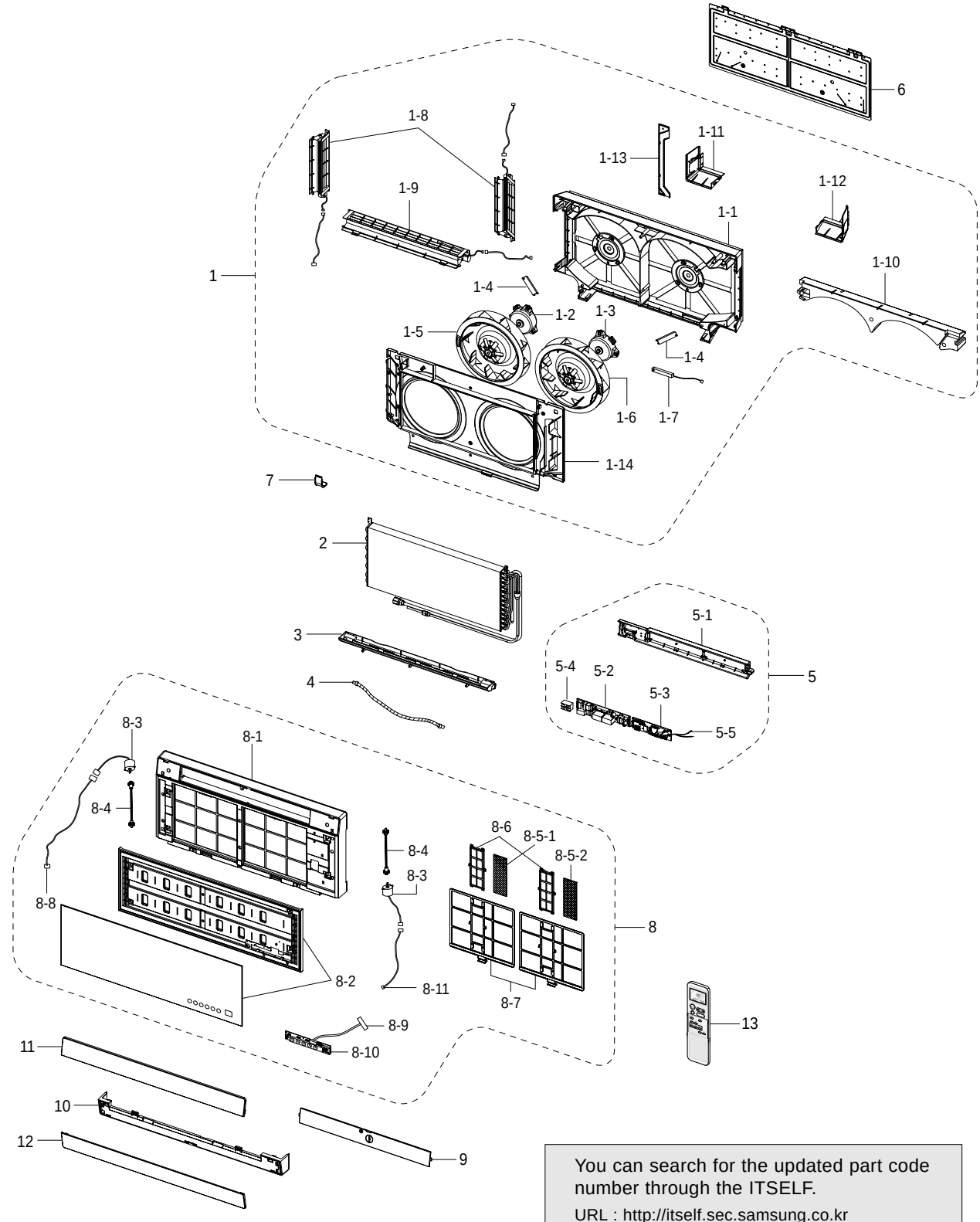
<table>
<tr><th>Part</th><th colspan="2">Breakdown Inspection Method</th></tr>
<tr><td rowspan="3">Room Temperature Sensor</td><td colspan="2">Measure resistance with a tester</td></tr>
<tr><td>Normal</td><td>At the normal temperature 37kΩ~ 8.3kΩ(-7˚C~+30˚C) *Refer to Table 6-4-4.</td></tr>
<tr><td>Abnormal</td><td>∞, 0Ω · · · Open or Short</td></tr>
<tr><td rowspan="3">Room Fan Motor</td><td colspan="2">Measure the resistance between terminals of the connector (CN73) with a tester.</td></tr>
<tr><td>Normal</td><td>At the normal temperature (10˚C ~ 30˚C)

<table>
<tr><th>Compare terminal</th><th>Resistance</th><th>Remark</th></tr>
<tr><td>Yellow, Blue</td><td>404.4Ω±10%</td><td>Main</td></tr>
<tr><td>Yellow, Red</td><td>340Ω±10%</td><td>Sub</td></tr>
</table></td></tr>
<tr><td>Abnormal</td><td>∞, 0Ω · · · Open or Short</td></tr>
<tr><td rowspan="3">Outdoor Fan Motor</td><td colspan="2">Measure the resistance between motor wires with a tester.</td></tr>
<tr><td>Normal</td><td>At the normal temperature (10˚C ~ 30˚C)

<table>
<tr><th>Compare terminal</th><th>Resistance</th><th>Remark</th></tr>
<tr><td>Yellow, Red</td><td>360Ω±10%</td><td>Main</td></tr>
<tr><td>Black, Yellow</td><td>328Ω±10%</td><td>Sub</td></tr>
</table></td></tr>
<tr><td>Abnormal</td><td>∞, 0Ω · · · Open or Short</td></tr>
<tr><td rowspan="3">Stepping Motor
(Discharge Louver : B/L/R)</td><td colspan="2">Measure the resistance between the red wire and each terminal wire with a tester.</td></tr>
<tr><td>Normal</td><td>About 300 Ω at the normal temperature (20˚C ~ 30˚C)</td></tr>
<tr><td>Abnormal</td><td>∞, 0Ω · · · Open or Short</td></tr>
<tr><td rowspan="3">Stepping Motor
(Grille Motor)</td><td colspan="2">Measure the resistance between connector 3 and each terminal wire with a tester.</td></tr>
<tr><td>Normal</td><td>About 120 Ω at the normal temperature (20˚C ~ 30˚C)</td></tr>
<tr><td>Abnormal</td><td>∞, 0Ω · · · Open or Short</td></tr>
</table>

7. Exploded Views and Parts List

7-1 Indoor Unit



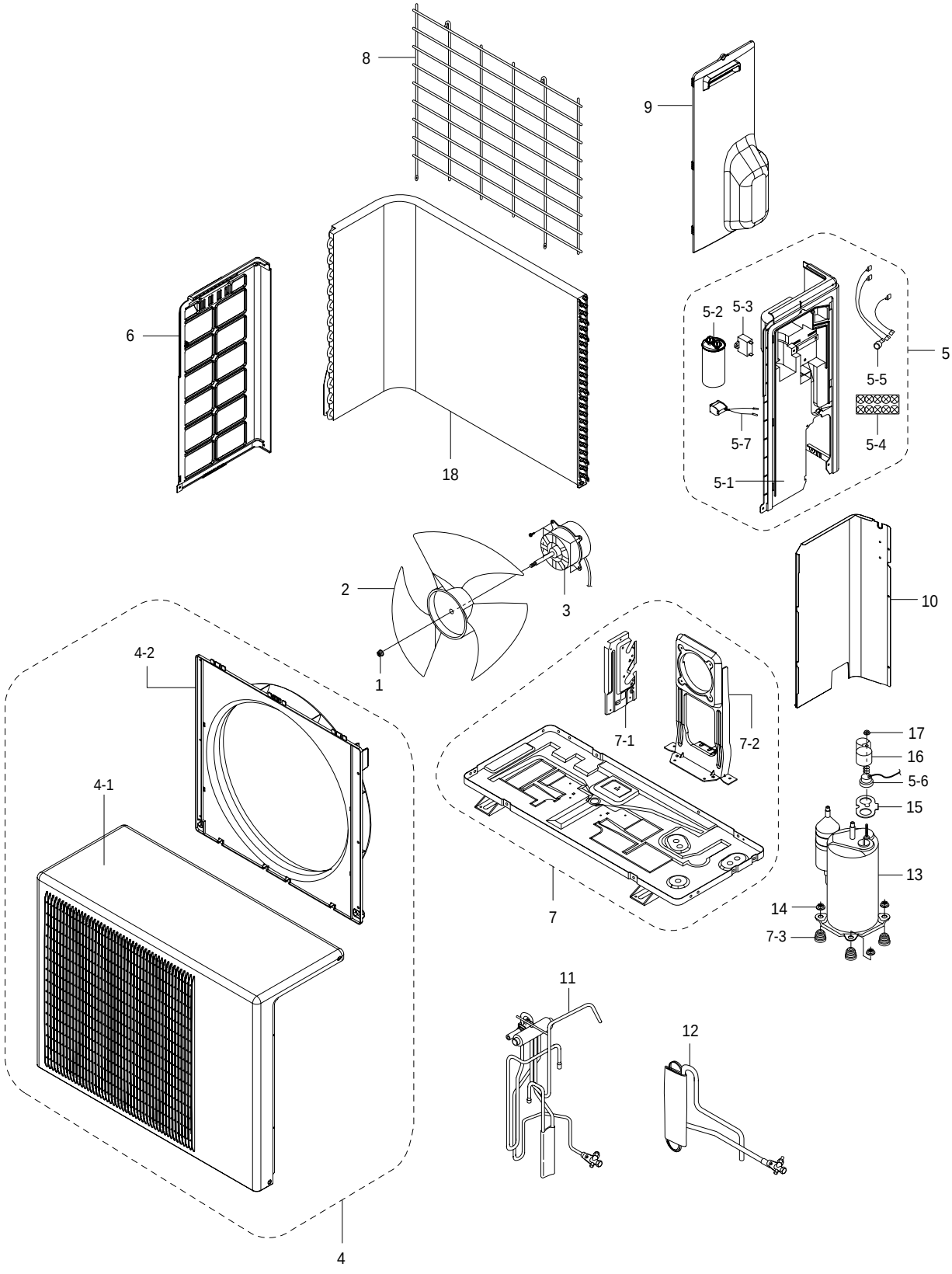
You can search for the updated part code number through the ITSELF.

URL : http://itself.sec.samsung.co.kr

■ **Parts List**

No.	Code No.	Description	Specification	Q'TY		Remark
				SH09AI8R	SH09AI8V	
1	DB94-00291E	ASS'Y BACK BODY	ASS'Y	1	1	
1-1	DB94-00296A	ASS'Y BACK BODY INSULATION	HIPS,ASS'Y	1	1	
1-2	DB32-00182B	MOTOR FAN LF	ASS'Y	1	1	
1-3	DB32-00182A	MOTOR FAN RH	ASS'Y	1	1	
1-4	DB61-01301A	HOLDER WIRE	SGCC-M,T0.8	2	2	
1-5	DB31-00174A	TURBO FAN LF	AS+G/F	1	1	
1-6	DB31-00173A	TURBO FAN RH	AS+G/F	1	1	
1-7	DB91-00265A	ASS'Y IONIZER	ASS'Y	1	1	
1-8	DB92-00374A	ASS'Y BLADE SIDE	ASS'Y	1	1	
1-9	DB92-00372A	ASS'Y BLADE LOW	ASS'Y	1	1	
1-10	DB69-00692A	CUSHION BODY	EPS	1	1	
1-11	DB63-00682A	COVER BODY LF	HIPS	1	1	
1-12	DB63-00683A	COVER BODY RH	HIPS	1	1	
1-13	DB70-00452A	PLATE-WIRE HOLDER	ASS'Y	1	1	
1-14	DB94-00289B	ASS'Y BELL MOUTH	ASS'Y	1	1	
2	DB96-02579B	ASS'Y EVAP	ASS'Y	1	1	
3	DB94-00286A	ASS'Y TRAY DRAIN	ASS'Y	1	1	
4	DB94-00315D	ASS'Y DRAIN HOSE	ASS'Y	1	1	
5	DB93-01816A	ASS'Y CONTROL IN	ASS'Y	1	1	
5-1	DB63-00673A	COVER MAIN PCB LOW	ABS	1	1	
5-2	DB93-01518B	ASS'Y PCB MAIN AC	ASS'Y	1	1	
5-3	DB93-01519B	ASS'Y PCB MAIN DC	ASS'Y	1	1	
5-4	DB65-00125A	ASS'Y TERMINAL BLOCK	ASS'Y	1	1	
5-5	DB32-00020A	ASS'Y THERMISTOR-WIRE	ASS'Y	1	1	
6	DB70-00317A	HANGER-PLATE	SGCC-M	1	1	
7	DB61-01291A	HOLDER PIPE	HIPS	1	1	
8	DB92-00371V	ASS'Y PANEL FRONT	SATIN SILVER	-	1	
	DB92-00371U	ASS'Y PANEL FRONT	TROPICAL RED	1	-	
8-1	DB64-00784A	PANEL FRONT UP	HIPS	1	1	
8-2	DB90-01115V	ASS'Y COVER Grille SERVICE	SATIN SILVER	-	1	
	DB90-01115U	ASS'Y COVER Grille SERVICE	TROPICAL RED	1	-	
8-3	DB31-00166A	MOTOR STEPPING	2VDC 35PM412BN	1	1	
8-4	DB94-00292A	ASS'Y GEAR PINION	ASS'Y	1	1	
8-5-1	DB63-00420A	FILTER BIO	-	1	1	
8-5-2	DB63-00616C	FILTER DEODORIZATION	-	1	1	
8-6	DB63-00387B	COVER FILTER UP	ABS	1	1	
8-7	DB63-00684A	GUARD AIR FILTER	ABS	1	1	
8-8	DB39-00816B	ASS'Y C/W STEP MOTOR(LEFT)	ASS'Y	1	1	
8-9	DB93-01520A	ASS'Y DISPLAY PCB	ASS'Y	1	1	
8-10	DB93-01536A	ASS'Y C/W DISPLAY&S/W	ASS'Y	1	1	
8-11	DB39-00816A	ASS'Y C/W STEP MOTOR(RIGHT)	ASS'Y	1	1	
9	DB63-00679A	COVER MAIN PCB UP	ABS	1	1	
10	DB92-00368A	ASS'Y PANEL LOW	ASS'Y	1	1	
11	DB63-00681A	COVER DECO UP	HIPS	1	1	
12	DB90-01014B	ASS'Y COVER DECO LOW	ASS'Y	1	1	
13	DB93-02531R	ASS'Y-REMOCON	ARH-1314	1	1	

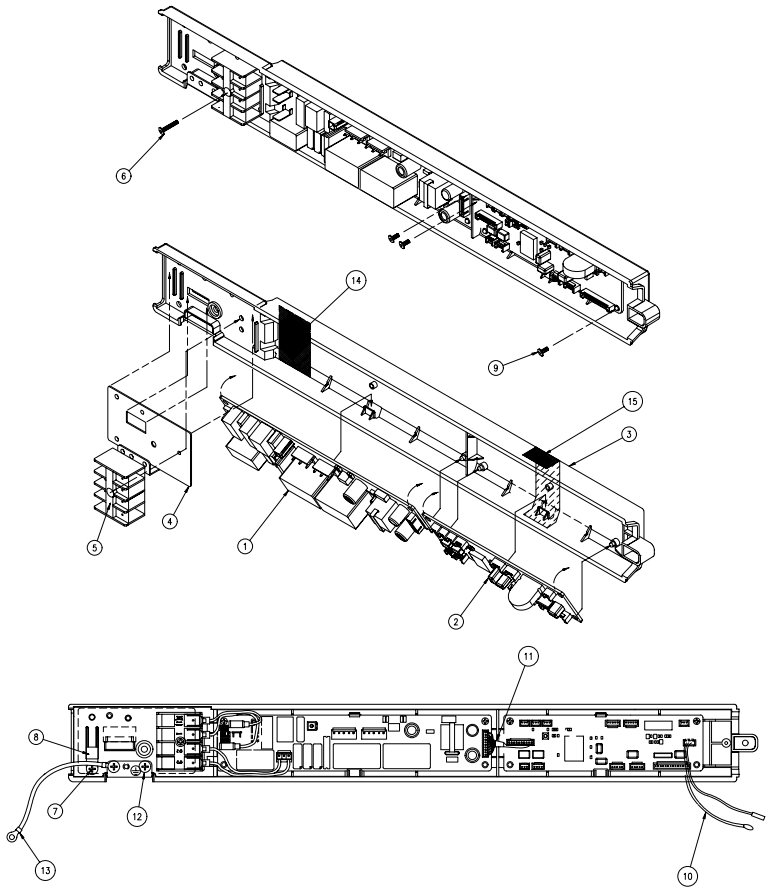
7-2 Outdoor Unit



■ **Parts List**

No.	Code No.	Description	Specification	Q'TY	Remark
				SH09AI8RX/SH09AI8VX	
1	DB60-30020A	NUT FLANGE	2C,M6,SM20C,NTR	1	
2	DB67-50063A	FAN PROPELLER	AS+G/F 20%, ø405	1	
3	DB31-10058C	MOTOR FAN OUT	220/240V,50/60Hz	1	
4	DB90-01338A	ASS'Y CABINET FRONT	ASS'Y	1	
4-1	DB64-00648A	CABINET FRONT	PP	1	
4-2	DB61-01113A	BELL MOUTH	PP	1	
5	DB90-01333B	ASS'Y CABINET SIDE RH	ASS'Y	1	
5-1	DB64-00650A	CABINET SIDE RH	PP	1	
5-2	2501-001238	CAPACITOR-COMP	40uF/450VAC	1	
5-3	2301-001375	CAPACITOR-MOTOR	1.5uF/450VAC	1	
5-4	DB65-40049E	TERMINAL BLOCK	4P	1	
5-5	DB93-01547D	ASS'Y LEAD WIRE	Samsung COMPor	1	
5-6	DB35-00028A	OLP	RBC 12054-12500	1	
5-7	DB33-00049A	ASS'Y SOLENOID COIL	ASS'Y	1	
6	DB64-00649A	CABINET SIDE LF	PP	1	
7	DB90-01056F	ASS'Y BASE OUTDOOR	ASS'Y	1	
7-1	DB61-01322A	BRACKET VALVE	GALVA	1	
7-2	DB61-00802A	BRACKET MOTOR	SGCC-M	1	
7-3	DB73-00070A	GROMMET-ISOLATOR	NR	3	
8	DB71-00085A	BAR STEEL	HSWR	1	
9	DB90-00947A	ASS'Y COVER VALVE	ASS'Y	1	
10	DB94-00500A	ASS'Y PARTITION	ASS'Y	1	
11	DB96-03011A	ASS'Y TUBE 4WAY VALVE	ASS'Y	1	
12	DB96-03277A	ASS'Y TUBE CAPILLARY	ASS'Y	1	
13	G4A091JU1EP	COMPRESSOR	G4A091	1	
14	DB60-30028A	NUT WASHER	HEX2CM8ZPC	3	
15	DB63-20002A	GASKET	EPDM	1	
16	DB63-10165D	COVER TERMINAL	POM	1	
17	DB60-30018A	NUT FLANGE	M5,SM20C	1	
18	DB96-03110A	ASS'Y CONDENSER	ASS'Y	1	

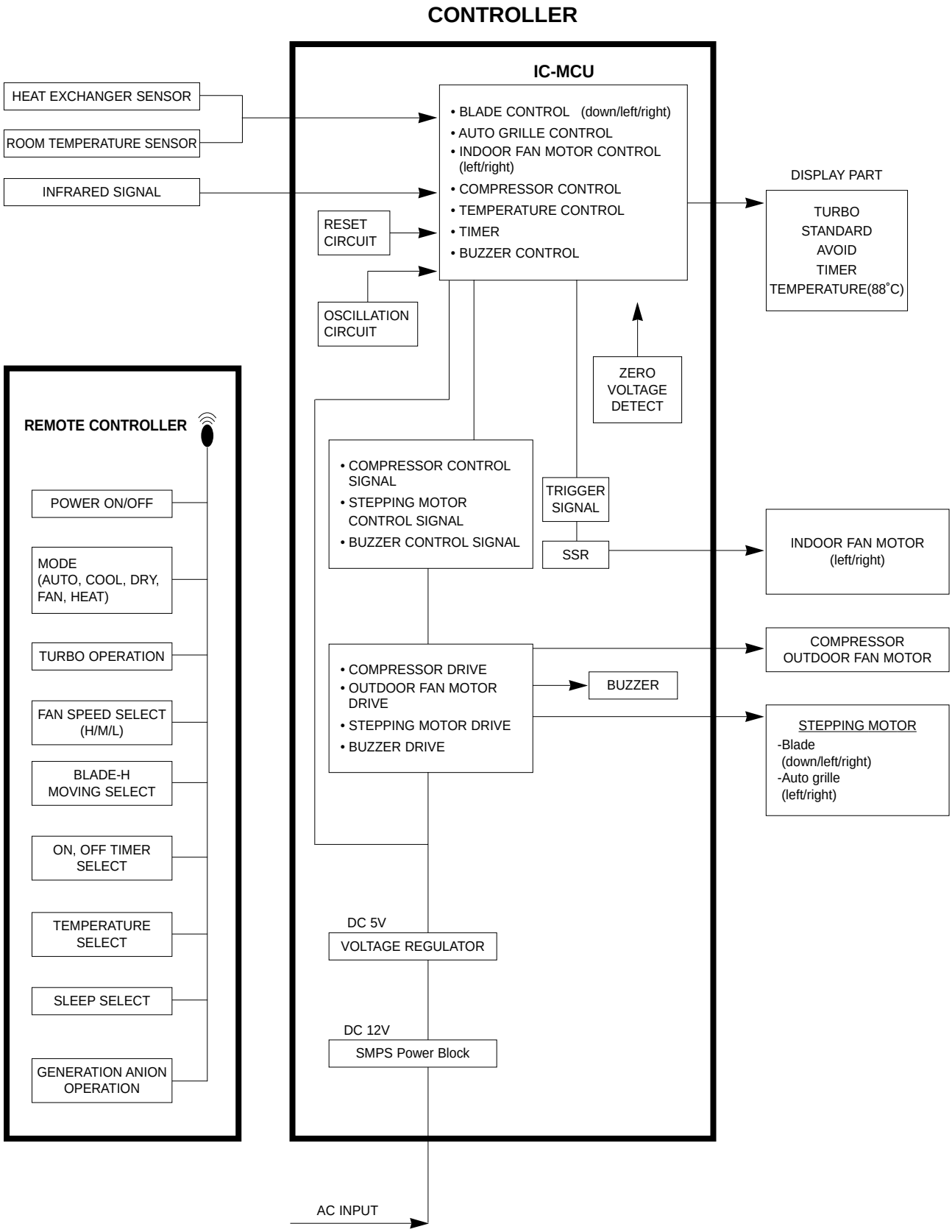
7-3 Ass'y Control In(Indoor Unit) : DB93-01816A



■ **Parts List**

No.	Code No.	Description	Specification	Q'TY	Remark
1	DB93-01518B	ASS'Y MAIN-PCB AC	220x45	1	
2	DB93-01519B	ASS'Y MAIN-PCB DC	160x45	1	
3	DB63-00673A	COVER-MAIN-P-LOW	ABS(V0) BLACK	1	
4	DB61-01290A	HOLDER-CLAMP-IN	SGCC-M, Z T1.0	1	
5	DB65-00125A	ASS'Y TERMINAL-BLOCK	4P	1	
6	6001-000929	SCREW-MACHINE	PH M3xL20	1	
7	6001-000035	SCREW-MACHINE	TH M4xL8	1	
8	DB65-10074E	CABLE-CLAMP	DA-5N, NK-5N	1	
9	6002-000534	SCREW-TAPPING	PH, 3x8, ZPC(BLK)	3	
10	DB32-00020A	ASS'Y THERMISTOR	103AT	1	
11	DB93-01554A	WIRE CONNECT JUMP	10P	1	
12	6009-001001	SCREW-SPECIAL	M4xL8	2	
13	DB39-00148B	WIRE CONNECT EARTH	L=100, AWG#16	1	
14	DB62-01636F	SEAL-COVER MAIN PCB LOW A	FLOCKED, T0, 4, 27x45	1	
15	DB62-01636G	SEAL-COVER MAIN PCB LOW B	FLOCKED, T0, 4, 86x22	1	

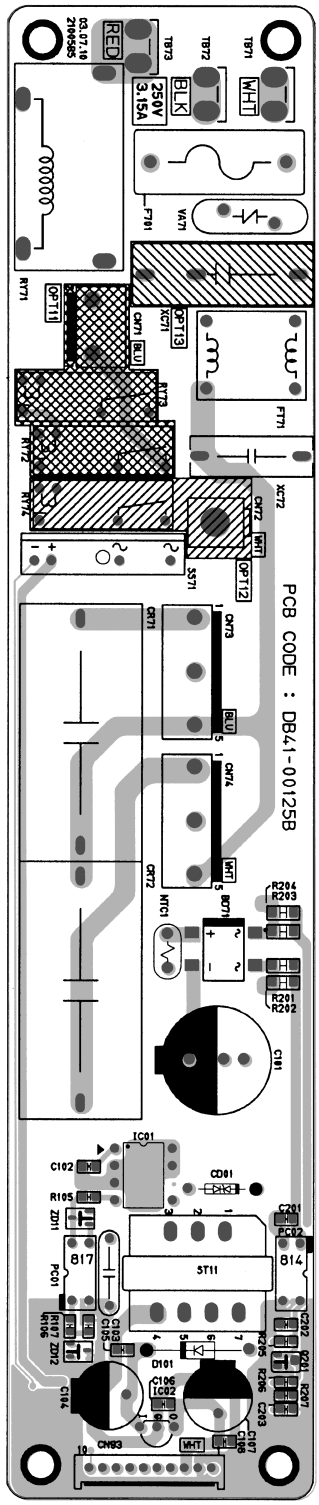
8. Block Diagram



9. PCB Diagram

9-1 ASS'Y MAIN PCB : DB93-01518B

■ TOP



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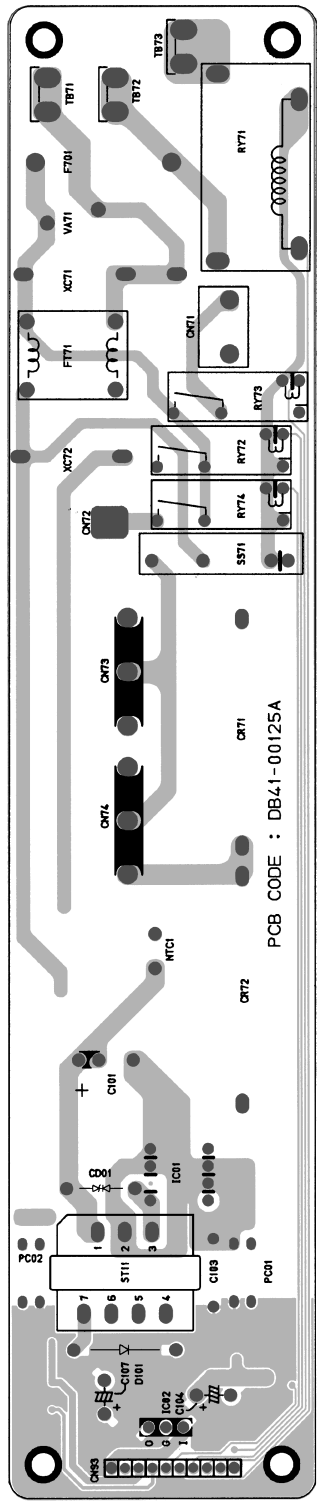
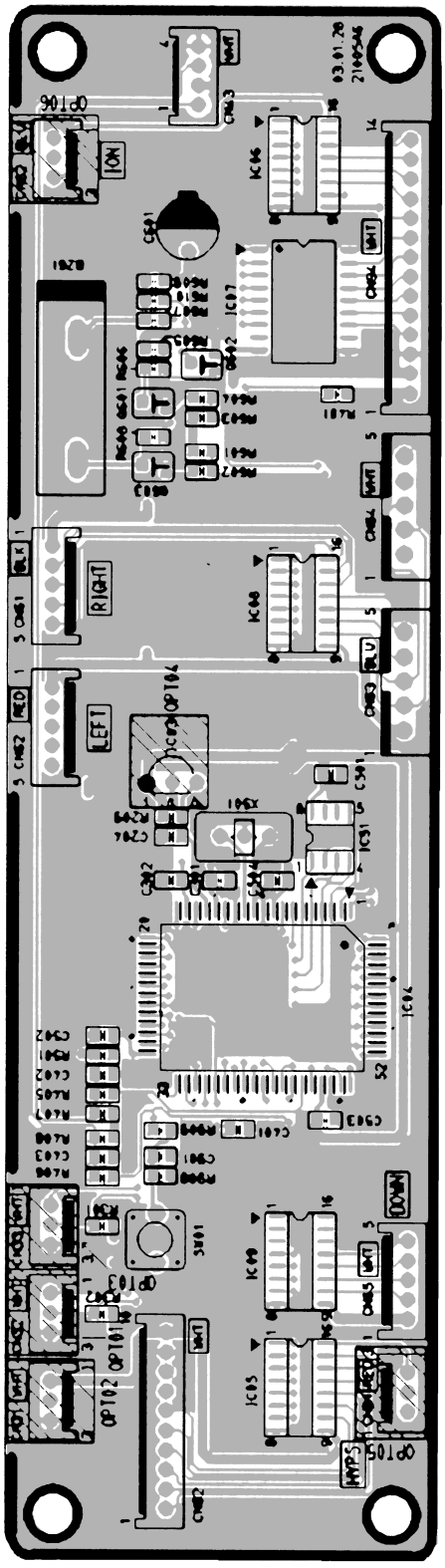


■ Parts List

Location No.	Description	Specification
BD71	DIODE-BRIDGE	DF06S,600V,1A,SMD-4,TP
C101	C-AL	15uF,450V
C102	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012,
C103	C-R NETWORK	2.2nF/12MΩ
C104	C-AL	1000uF,20%,25V,GP,TP,10x20,5
C105	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012,
C106	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012,
C107	C-AL	470uF,20%,16V,GP,TP,10x12.5,5
C108	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012,
C201	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012,
C202	C-CERAMIC,CHIP	10nF,+80-20%,50V,Y5V,TP,2012
C203	C-CERAMIC,CHIP	10nF,+80-20%,50V,Y5V,TP,2012
CD01	DIODE-TVS	ST02D-200,185/200/215V,200W,DO-214
CN73	CONNECTOR-HEADER	1WALL,3P,1R,7.92mm,STRAIGHT,SN,BL
CN74	CONNECTOR-HEADER	1WALL,3P,1R,7.92mm,STRAIGHT,SN,WH
CN93	CONNECTOR-HEADER	BOX,10P,1R,-,STRAIGHT,SN
CR71	C-FILM,MPPF	1.2uF,10%,450Vac,BK,38x18x30,3
CR72	C-FILM,MPPF	1.2uF,10%,450Vac,BK,38x18x30,3
D101	DIODE-RECTIFIER	UG2D,200V,2A,DO-204AC,TP
F701	FUSE-CARTRIDGE	250V,3.15A,TIME-LAG,GLASS,5x20mm
FT71	LS404190M	AS-S660,19mH,+50,-30%,-,300Mohm,2A,-,-,-
IC01	IC-PWM CONTROLLER	266,DIP,8P,300MIL,PLASTIC,-0.3/7
IC02	IC-POSI	ADJUST,REG,78L05A,TO-92,3P,-,PLASTIC,4.6
NTC1	THERMISTOR-NTC	22ohm,1.4A,3100K,9.5mW/C,-,7.0,-
PC01	PHOTO-COUPLER	TR,130-260%,200mW,DIP-4,ST
PC02	PHOTO-COUPLER	TR,50-150%,200mW,DIP-4,ST
Q201	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1
R105	R-CHIP	470ohm,5%,1/10W,DA,TP,2012
R106	R-CHIP	220ohm,5%,1/10W,DA,TP,2012
R107	R-CHIP	220ohm,5%,1/10W,DA,TP,2012
R201	R-CHIP	100Kohm,5%,1/4W,DA,TP,3216
R202	R-CHIP	100Kohm,5%,1/4W,DA,TP,3216
R203	R-CHIP	100Kohm,5%,1/4W,DA,TP,3216
R204	R-CHIP	100Kohm,5%,1/4W,DA,TP,3216
R205	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012
R206	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012
R207	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012
RY71	RELAY-POWER	12VDC,0.9W,75mA,SPST,MAX 20msec,10mS
SS71	SSR	12Vdc,-,2A,1mS,1mS
ST11	TRANS SWITCHING	JT1916-09,-,310V,FERRITE,-,EI191
TB71(N)	CONNECTOR-TERMINAL	TAB,MALE,-,6.35x0.8mm
TB72(L)	CONNECTOR-TERMINAL	TAB,MALE,-,6.35x0.8mm
TB73	CONNECTOR-TERMINAL	TAB,MALE,-,6.35x0.8mm
VA71	VARISTOR	560V,2500A,17.5x7.5mm,TP
XC71	C-FILM,MPEF	220NF,10%,275V,BK,26.5x8.5x17mm,22.5
XC72	C-FILM,MPEF	100nF,10%,275V,BK,18x6x12,15
ZD11	DIODE-ZENER	BZX84C3V6,3.6,350mW,SOT-23,TP
ZD12	DIODE-ZENER	BZX84-C11,10.4-11.6V,350mW,SOT-23,TP

9-2 ASS'Y MAIN PCB(DC) : DB93-01519B

■ TOP



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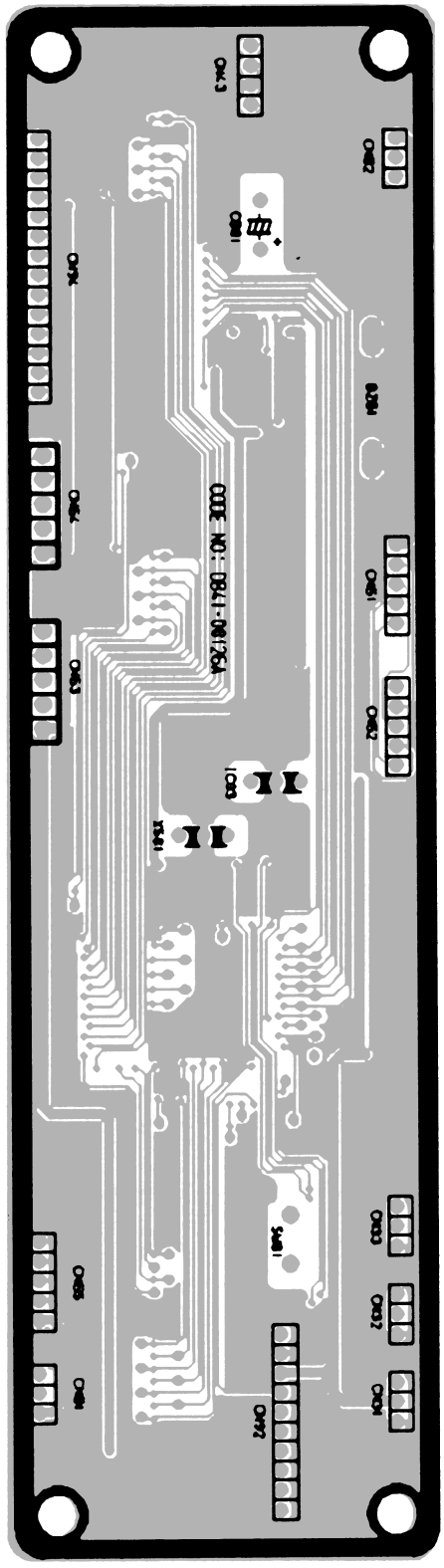
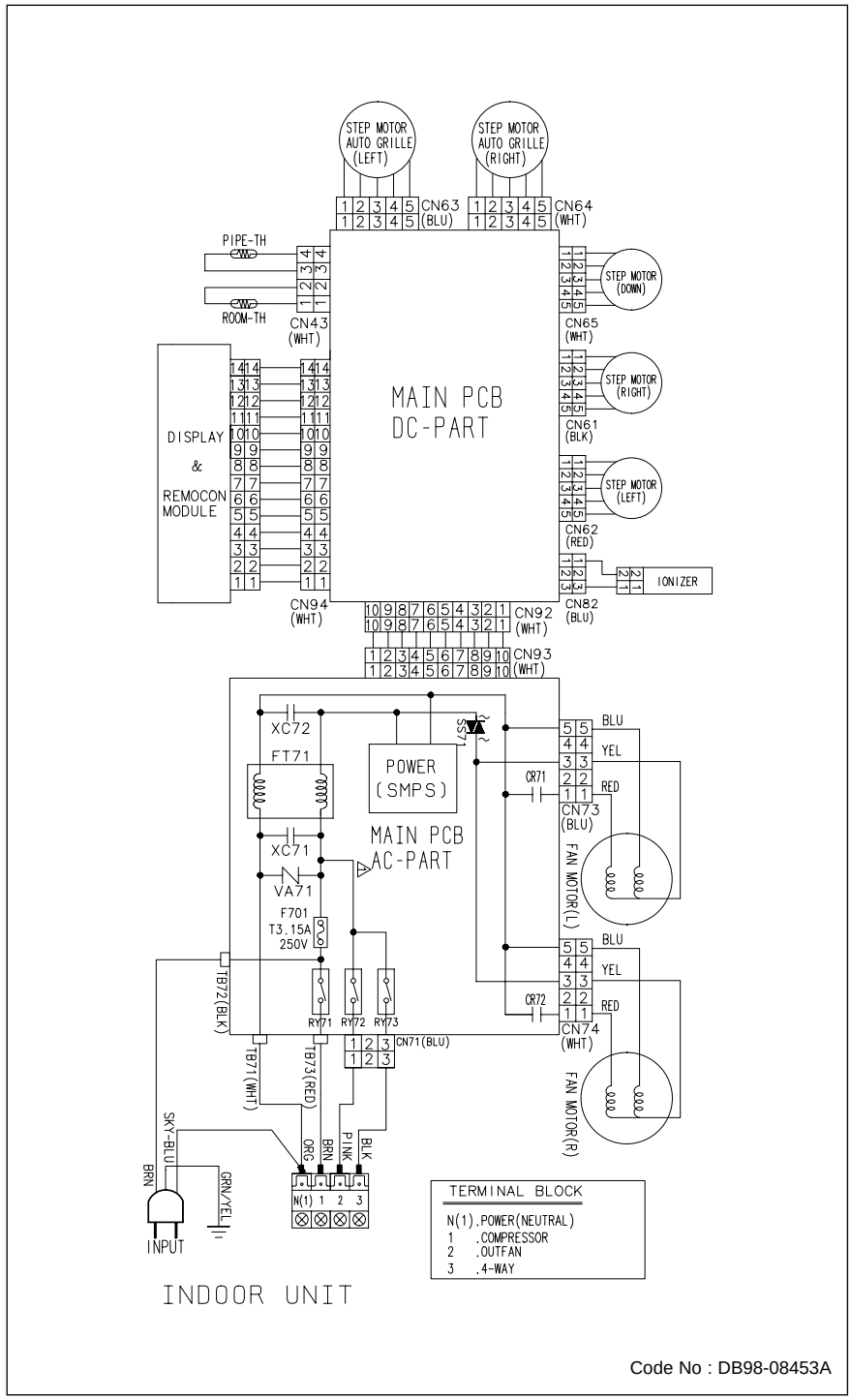


■ Parts List

Location No.	Description	Specification
BZ61	BUZZER-PIEZO	85DB,-,-,2KHz,-
C204	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012
C301	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012
C302	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012
C401	C-CERAMIC,CHIP	1nF,10%,50V,X7R,TP,2012,-
C402	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012
C403	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012
C501	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012
C502	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012
C503	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012
C504	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012
C601	C-AL	47uF,20%,50V,GP,TP,6.3x11,5
C901	C-CERAMIC,CHIP	100nF,+80-20%,50V,Y5V,TP,2012
CN43	CONNECTOR-HEADER	BOX,4P,1R,2mm,STRAIGHT,SN
CN61	CONNECTOR-HEADER	BOX,5P,1R,2mm,STRAIGHT,SN,BLK
CN62	CONNECTOR-HEADER	BOX,5P,1R,2mm,STRAIGHT,SN,BLU
CN63	CONNECTOR-HEADER	BOX,5P,1R,2.5mm,STRAIGHT,SN
CN64	CONNECTOR-HEADER	BOX,5P,1R,2.5mm,STRAIGHT,SN
CN65	CONNECTOR-HEADER	BOX,5P,1R,2.0mm,STRAIGHT,SN
CN82	CONNECTOR-HEADER	BOX,3P,1R,2mm,STRAIGHT,SN,BLU
CN92	CONNECTOR-HEADER	BOX,10P,1R,-,STRAIGHT,SN
CN94	CONNECTOR-HEADER	BOX,14P,1R,2mm,STRAIGHT,SN
IC04	IC MICOM	S3C848AXZZ-QTRB,-,64,+5V,10MHz,STM-0219-OB
IC05	TR	2003,NPN,7,1W,SOP-16,ST,1000
IC06	TR	2003,NPN,7,1W,SOP-16,ST,1000
IC07	IC-SOURCE DRIVER	TD62783AFW,SOL,18P,-,8,-500mA,TP
IC08	TR	2003,NPN,7,1W,SOP-16,ST,1000
IC09	TR	2003,NPN,7,1W,SOP-16,ST,1000
IC51	IC-EEPROM	93LC56,128x16Bit,SOP,8P,150MIL,-,2.5V,-,
Q601	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1
Q602	TR-SMALL SIGNAL	MMST2907A,PNP,200mW,SOT-23,TP,100-
Q603	TR-SMALL SIGNAL	2SC2412K,NPN,200mW,SOT-23,TP,1
R209	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012
R301	R-CHIP	1Kohm,5%,1/4W,DA,TP,3216
R302	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012
R401	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012
R405	R-CHIP	330ohm,5%,1/10W,DA,TP,2012
R406	R-CHIP	330ohm,5%,1/10W,DA,TP,2012
R407	R-CHIP	6.8Kohm,1%,1/10W,DA,TP,2012
R408	R-CHIP	6.8Kohm,1%,1/10W,DA,TP,2012
R501	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012
R601	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012
R602	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012
R603	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012
R604	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012
R605	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012
R606	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012
R607	R-CHIP	470ohm,5%,1/10W,DA,TP,2012
R608	R-CHIP	470ohm,5%,1/10W,DA,TP,2012
R609	R-CHIP	560ohm,5%,1/10W,DA,TP,2012
R610	R-CHIP	1Kohm,5%,1/10W,DA,TP,2012
R908	R-CHIP	10Kohm,5%,1/10W,DA,TP,2012
R909	R-CHIP	4.7Kohm,5%,1/10W,DA,TP,2012
SW01	SWITCH-TACT	12V,50MA,160GF,6.1x6.1x5.0mm,SPST
X501	RESONATOR-CERAMIC	10MHz,0.5%,TP,10.0x5.0x8.0mm

10. Wiring Diagram

10-1 Indoor Unit



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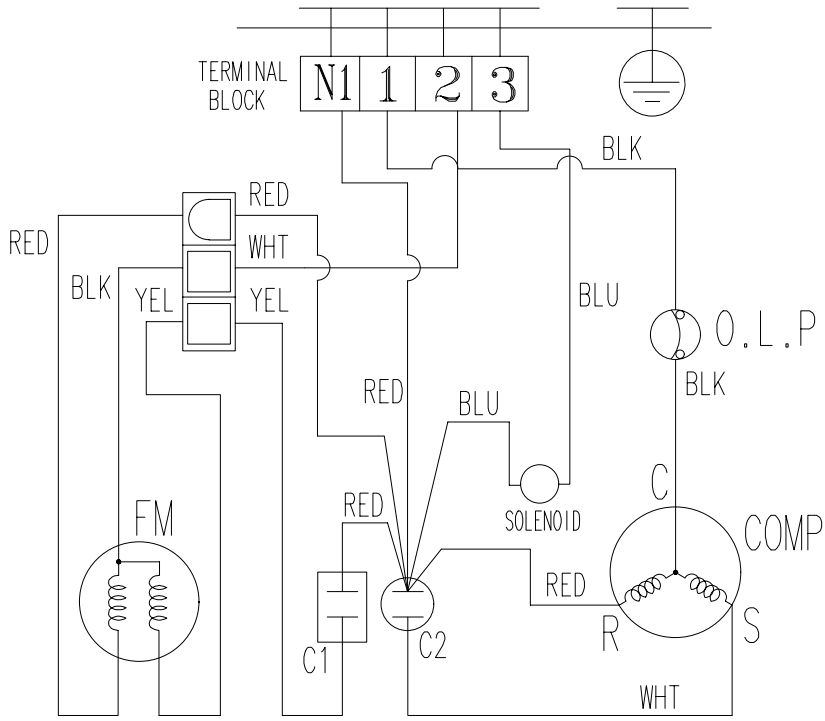
10-2 Outdoor Unit



C1 : MOTOR CAPACITOR
C2 : COMP CAPACITOR
FM : FAN MOTOR
O.L.P : OVER LOAD PROTECTOR

Code No : DB98-15123A

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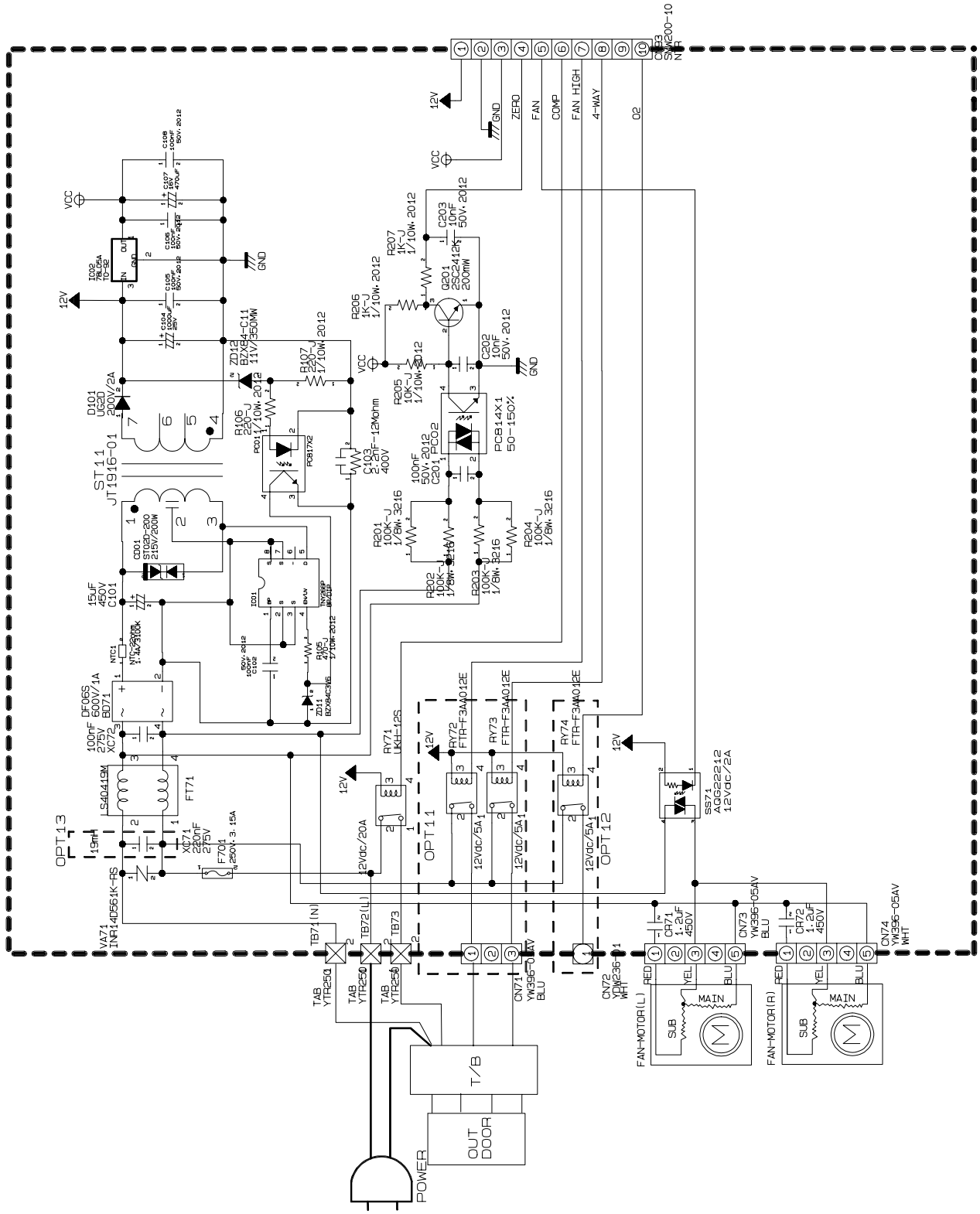
11. Schematic Diagram

11-1 Indoor Unit(AC-PART)



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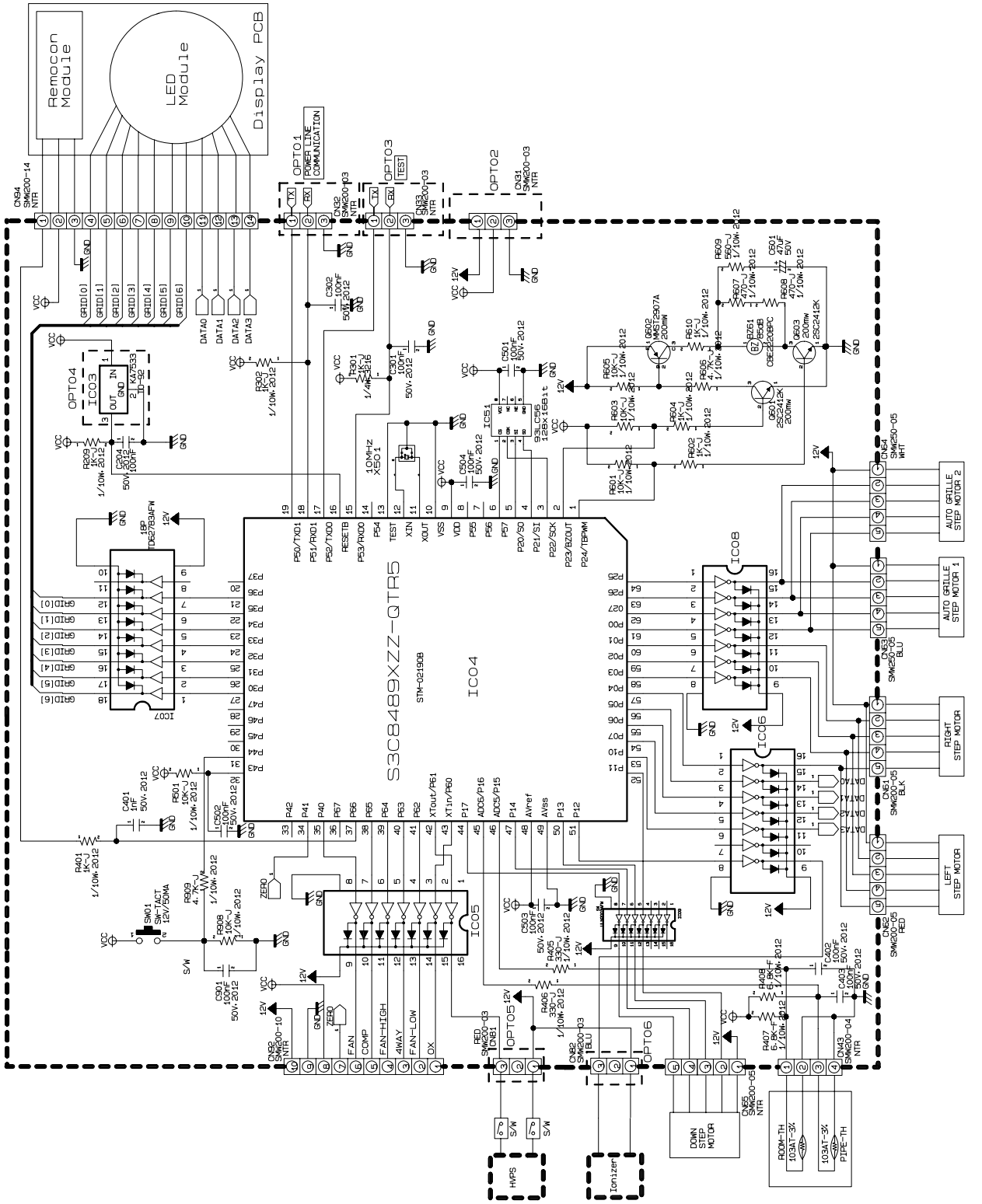
11-2 Indoor Unit(DC-PART)



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